

## DSP 3040 5-Axis Steel Structure Operating Instruction



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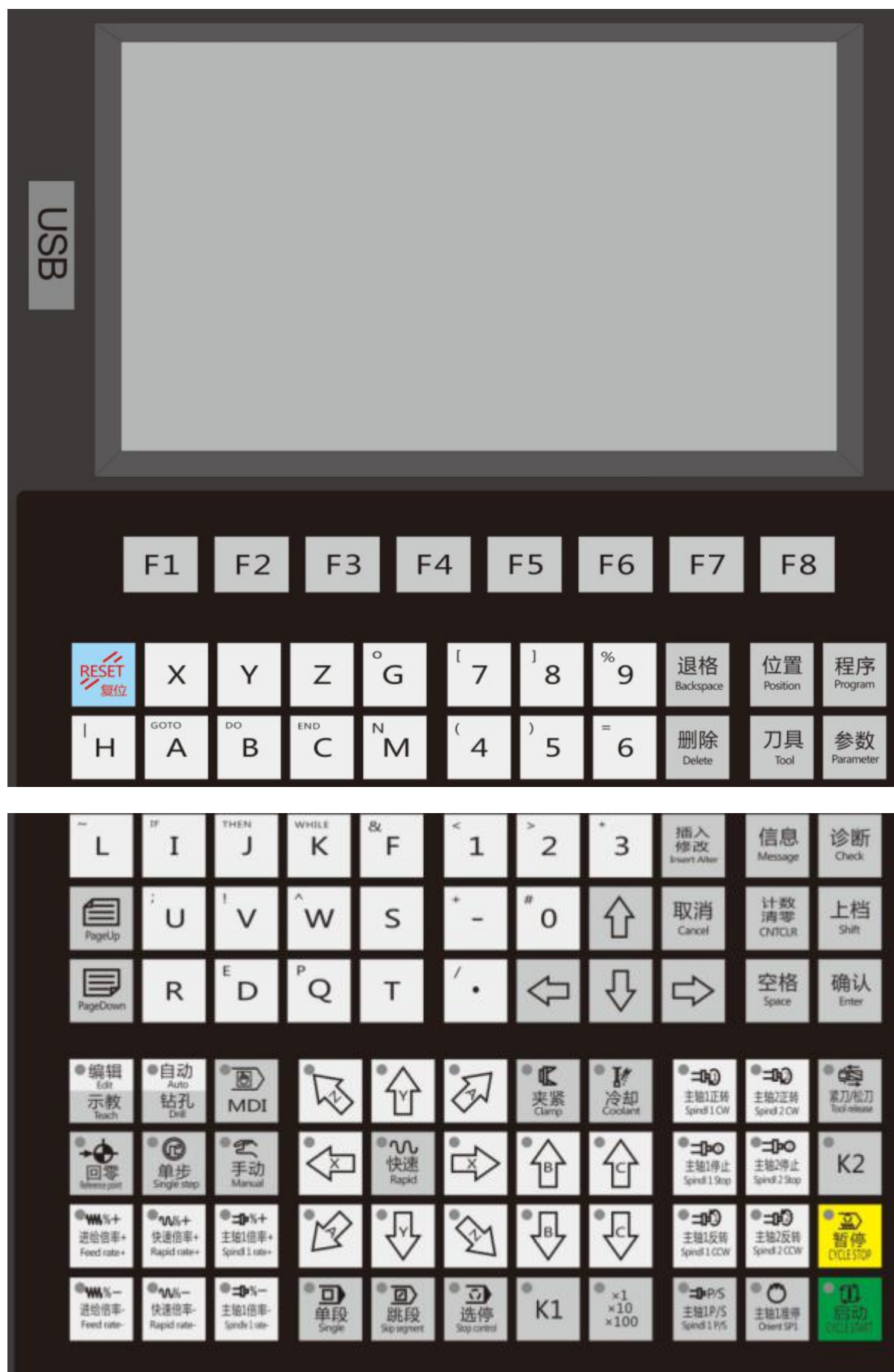
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**Note :The parts mentioned below like Dial Gauge, detector edge finder are chosen to buy, if you need these please mention it to the sales people.**

## Interface display



### User guide step by step:

## 1. Power on



## 2. Back to machine origin point.

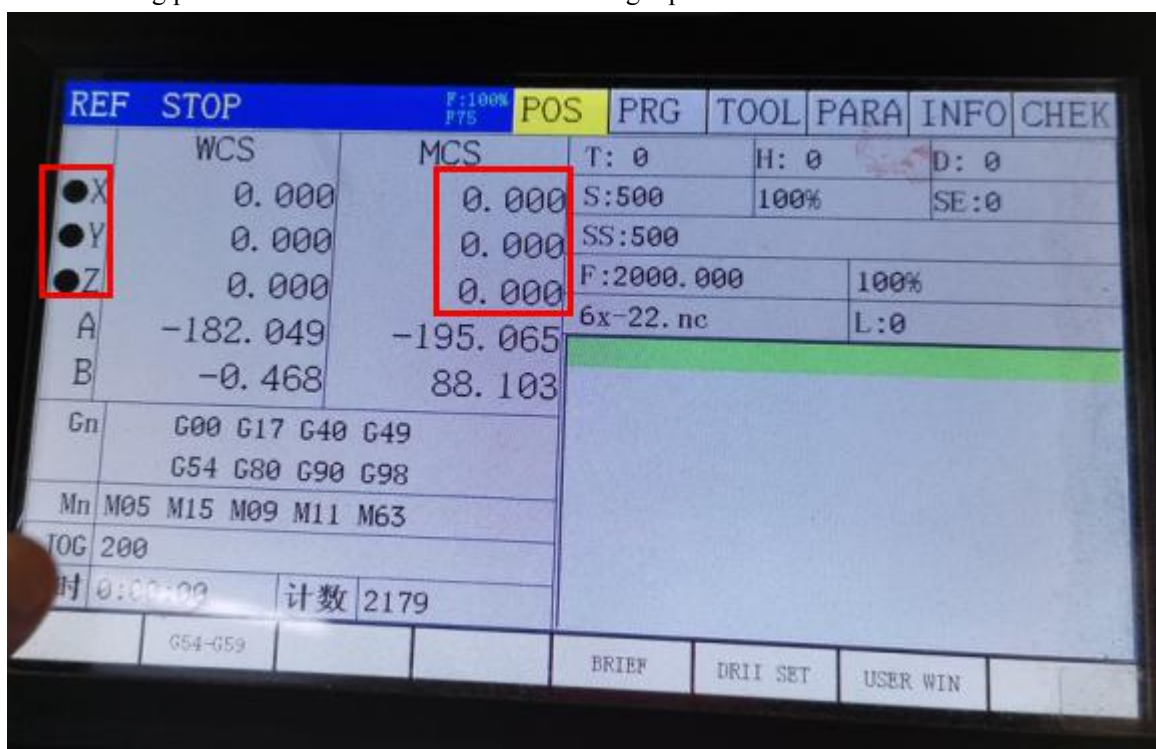
Press “reference point”key:



Then short press any “XYZ” key , XYZ axis will back to Machine origin point automatically;



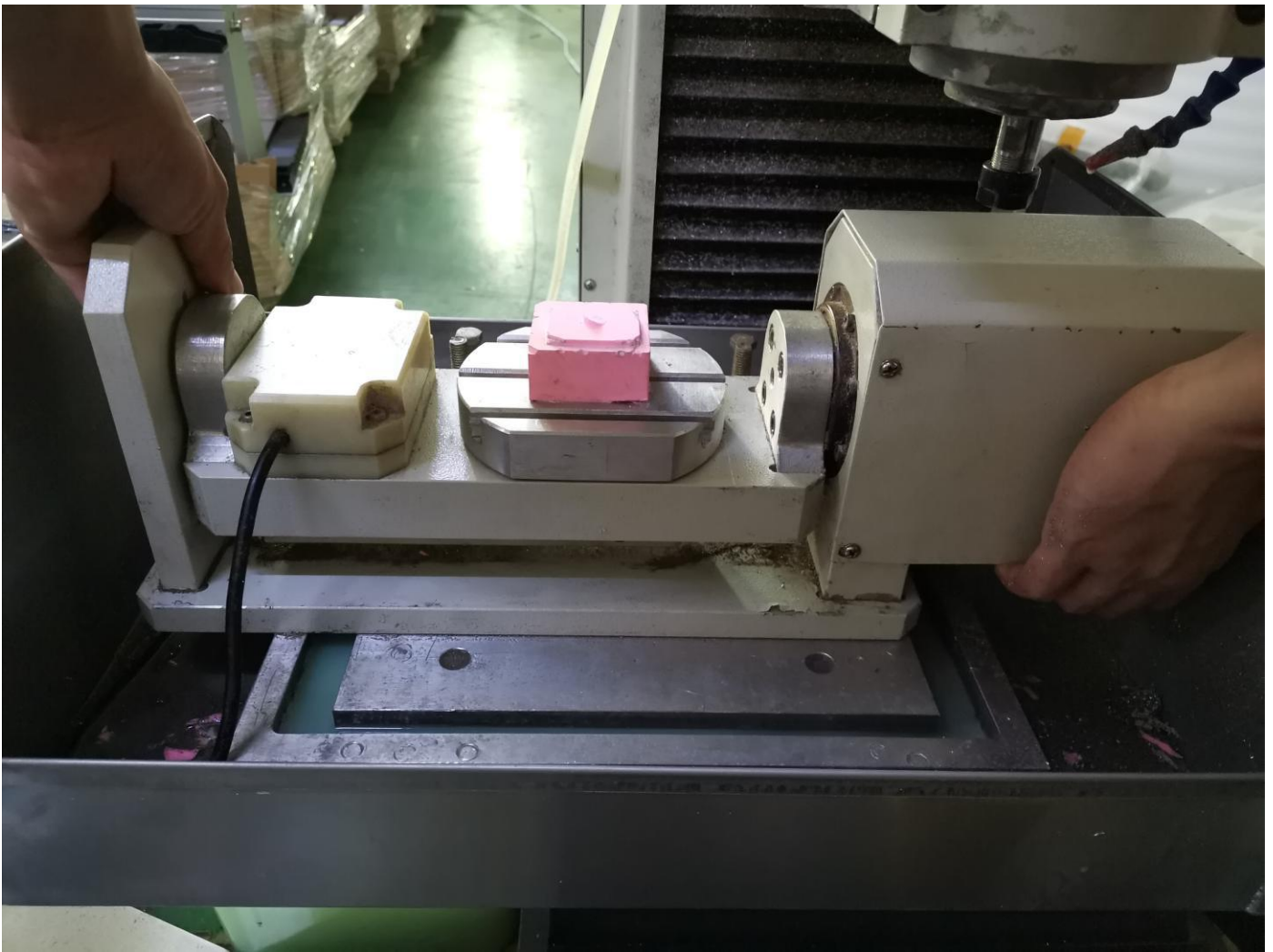
The following picture means XYZ back to Machine origin point.



### 3. Install AB axis

Put AB axis on a suitable position of the machine table.





Connect AB axis cable to the controller box



AB axis whole table calibration:

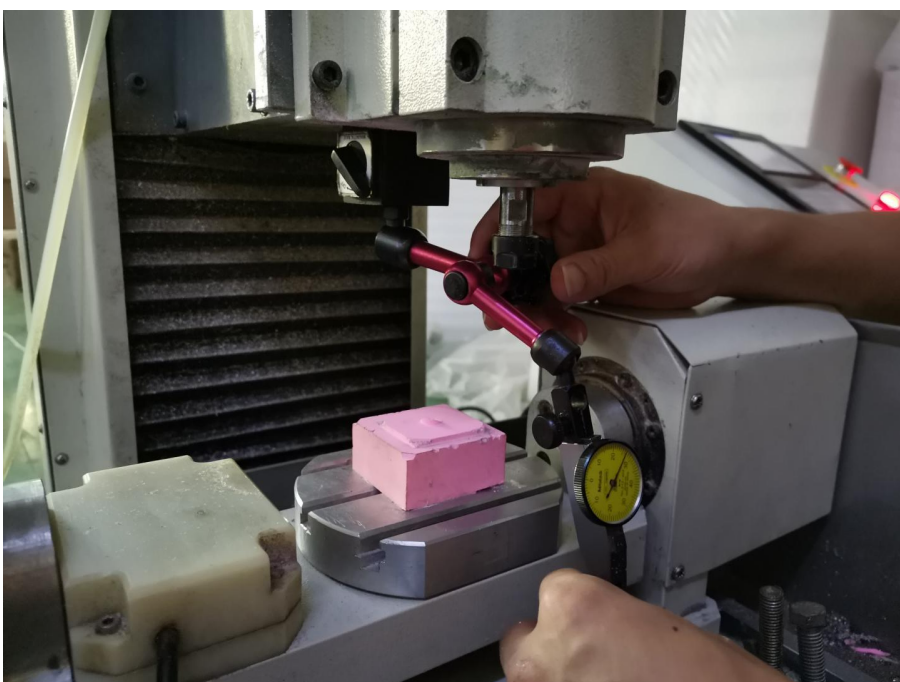
Press “single step” key to start handwheel:



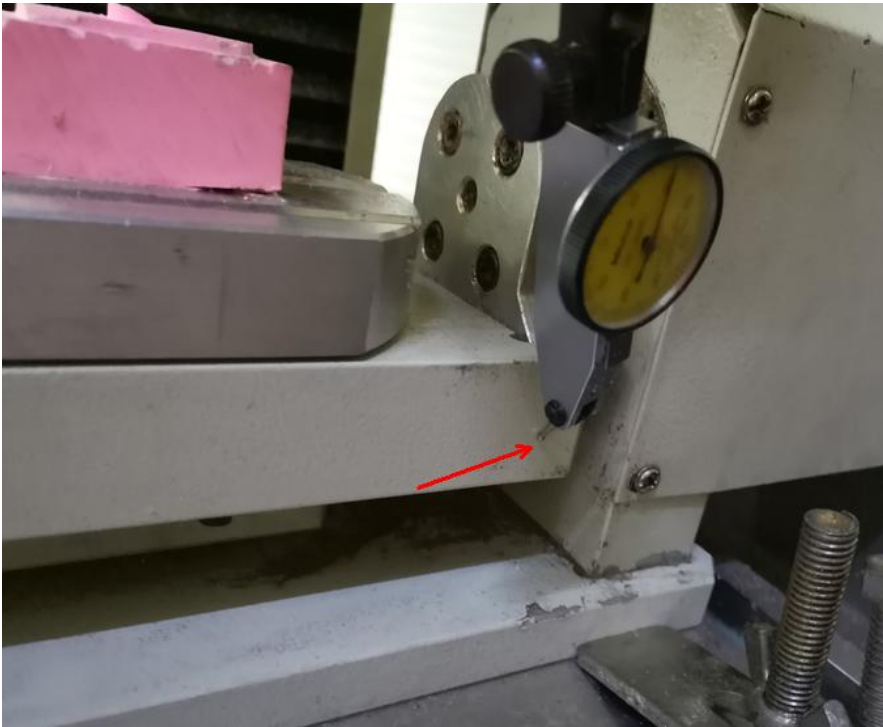
Make sure the button was pressed when make any adjustment, see picture below:



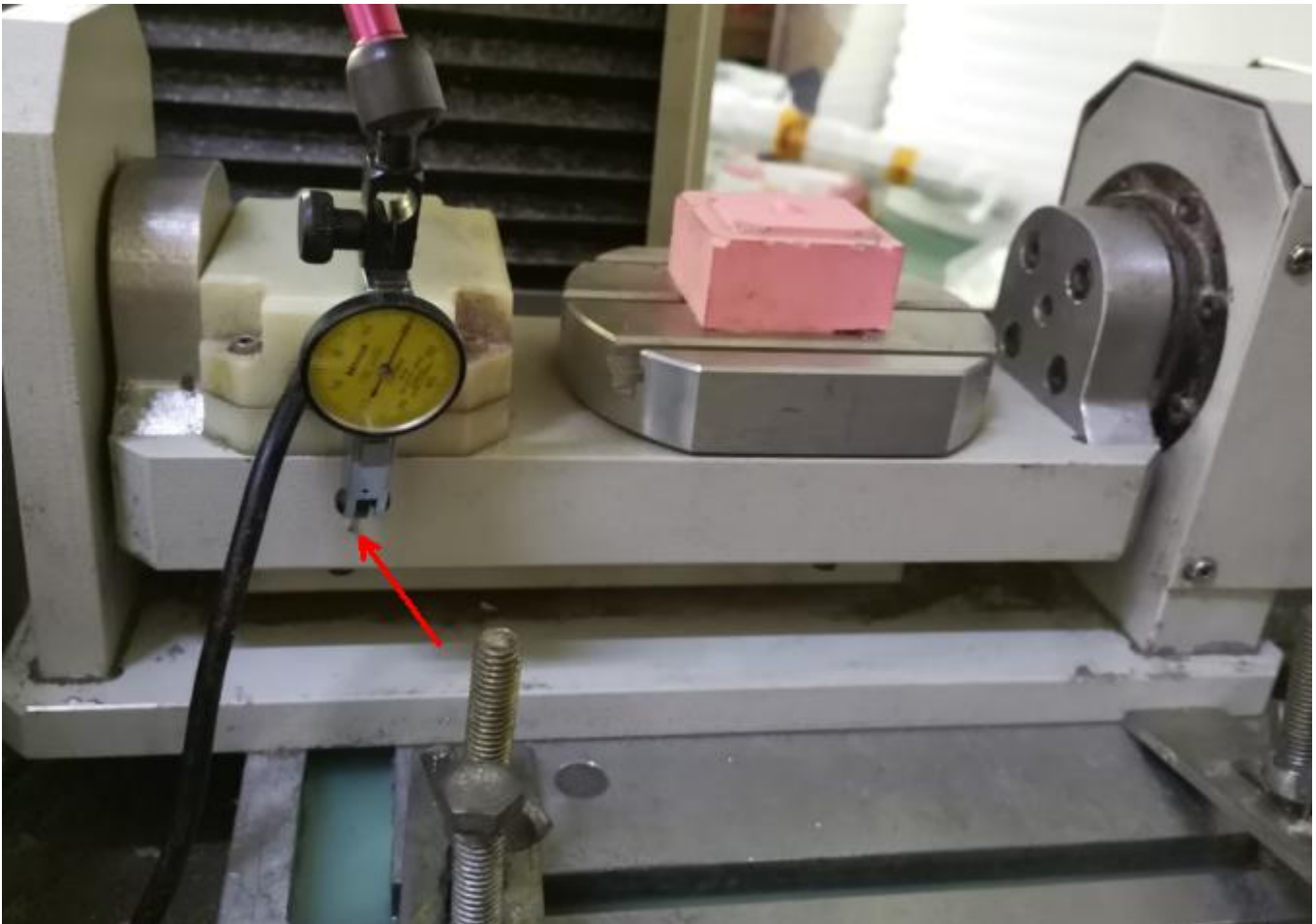
Stick **Dial Gauge** on a suitable position of Z axis;



Move axis by Handwheel to make the probe of Dial Gauge touch the A axis as picture, records the meter pointer on dial gauge.

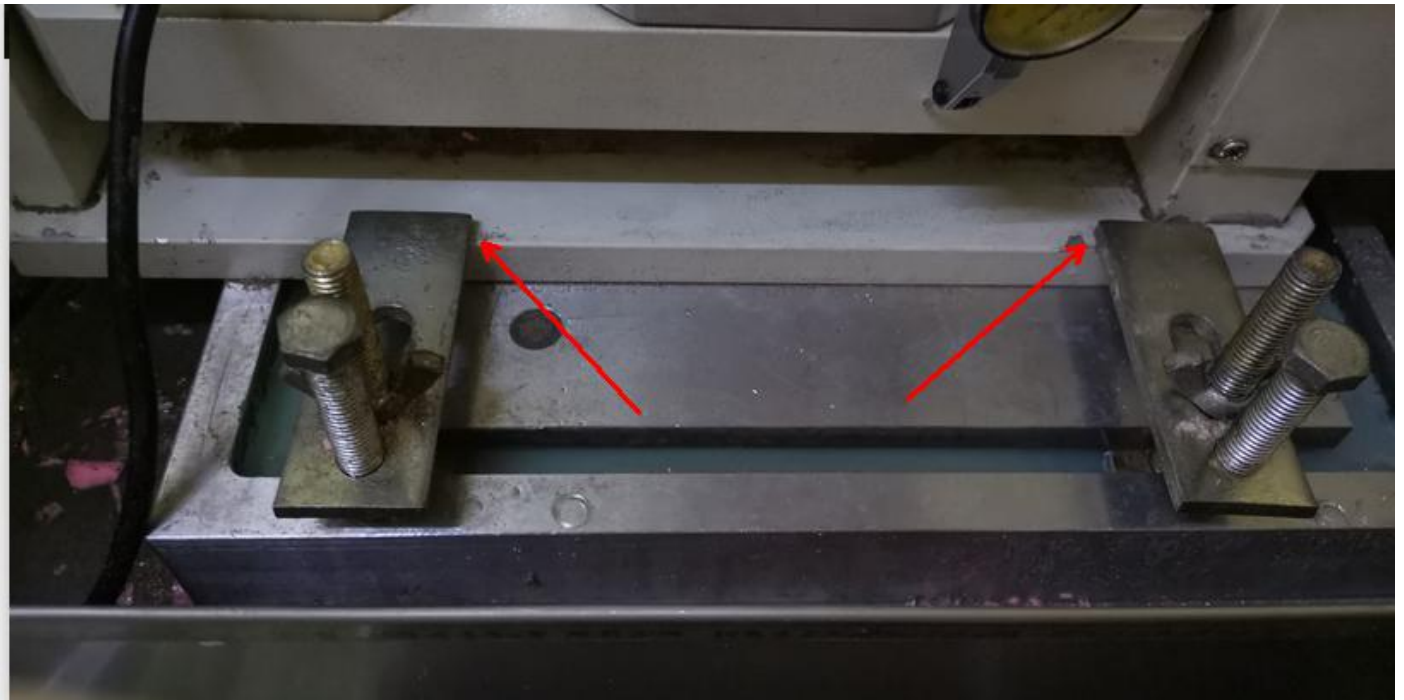


Then move X axis to another side, if the meter pointer no change or change range within 0.02mm, B axis calibration complete. If meter changes a lot, need to adjust the AB table manually.



After adjustment, Fix tight of the AB table





Adjust A axis, using the same way as AB axis table:



If the meter pointer changes a lot,



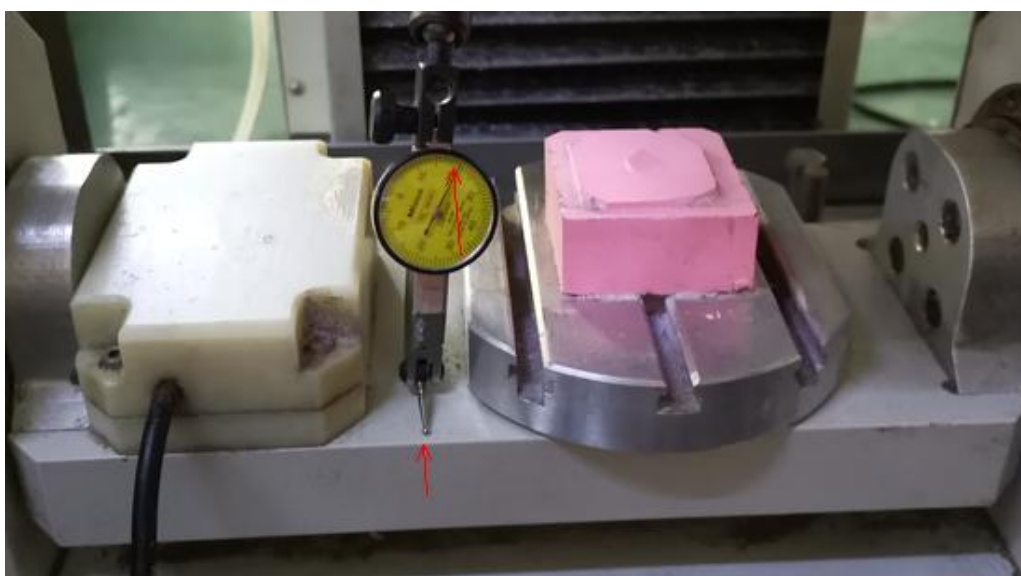
Use the handwheel to adjust A axis as follow:



Till the meter pointer at the same position



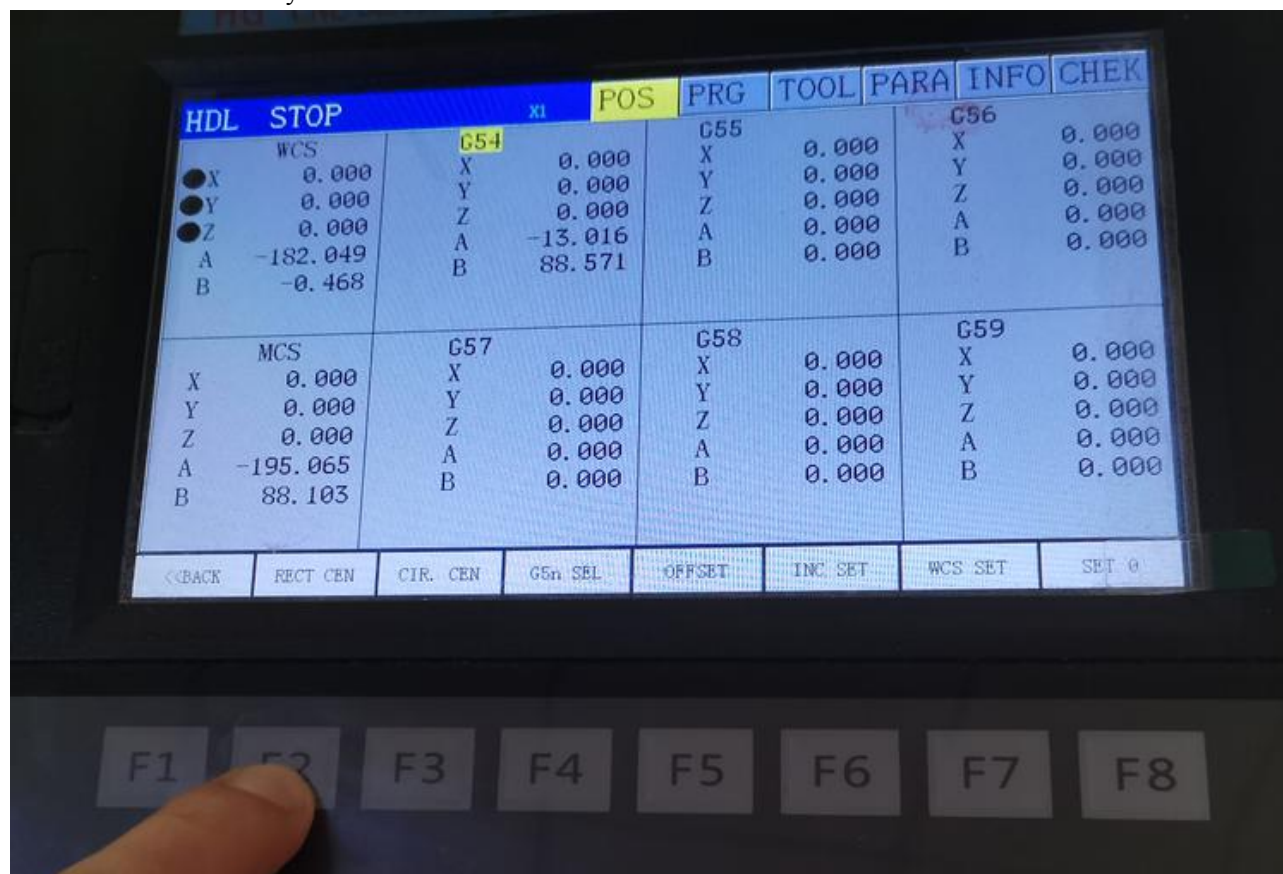
Then B axis:



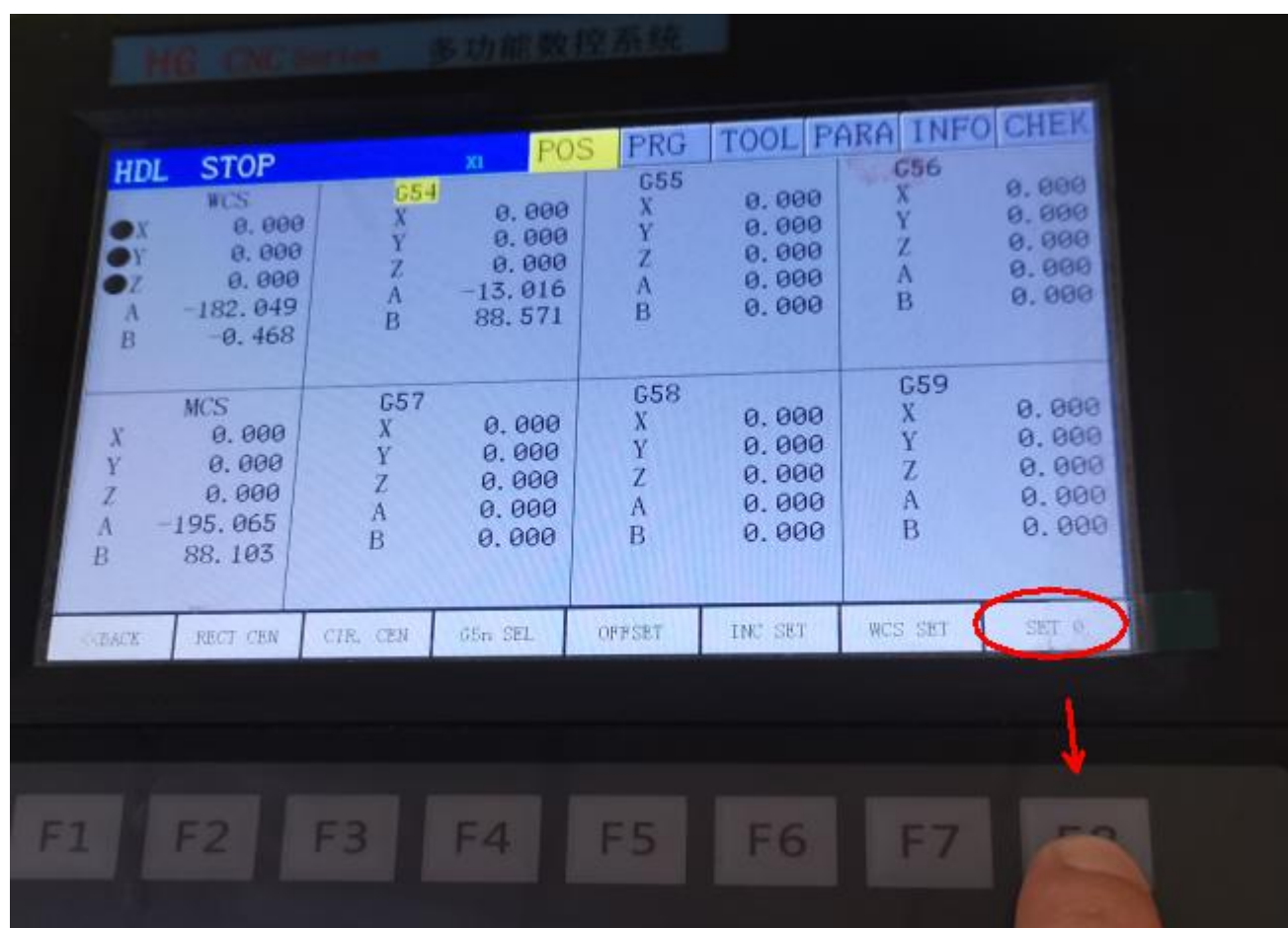


Copy the AB axis calibrated parameters to system:

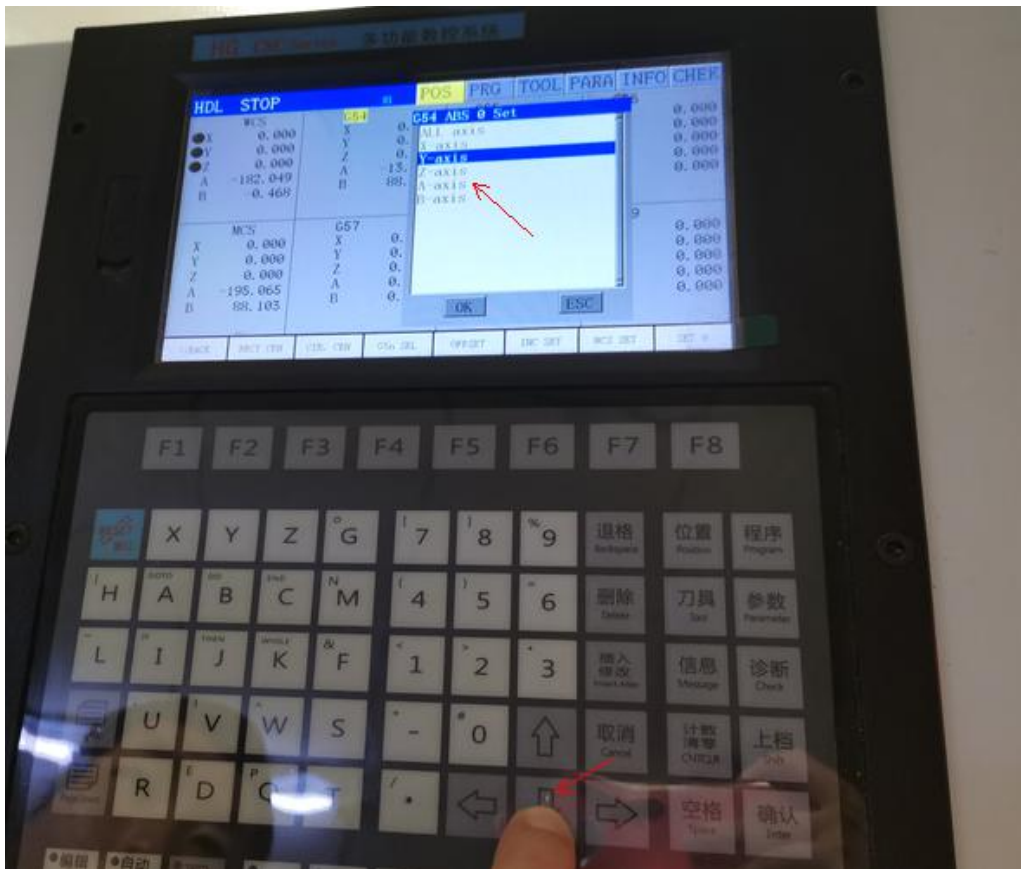
Press “F2” lead to G54 system:



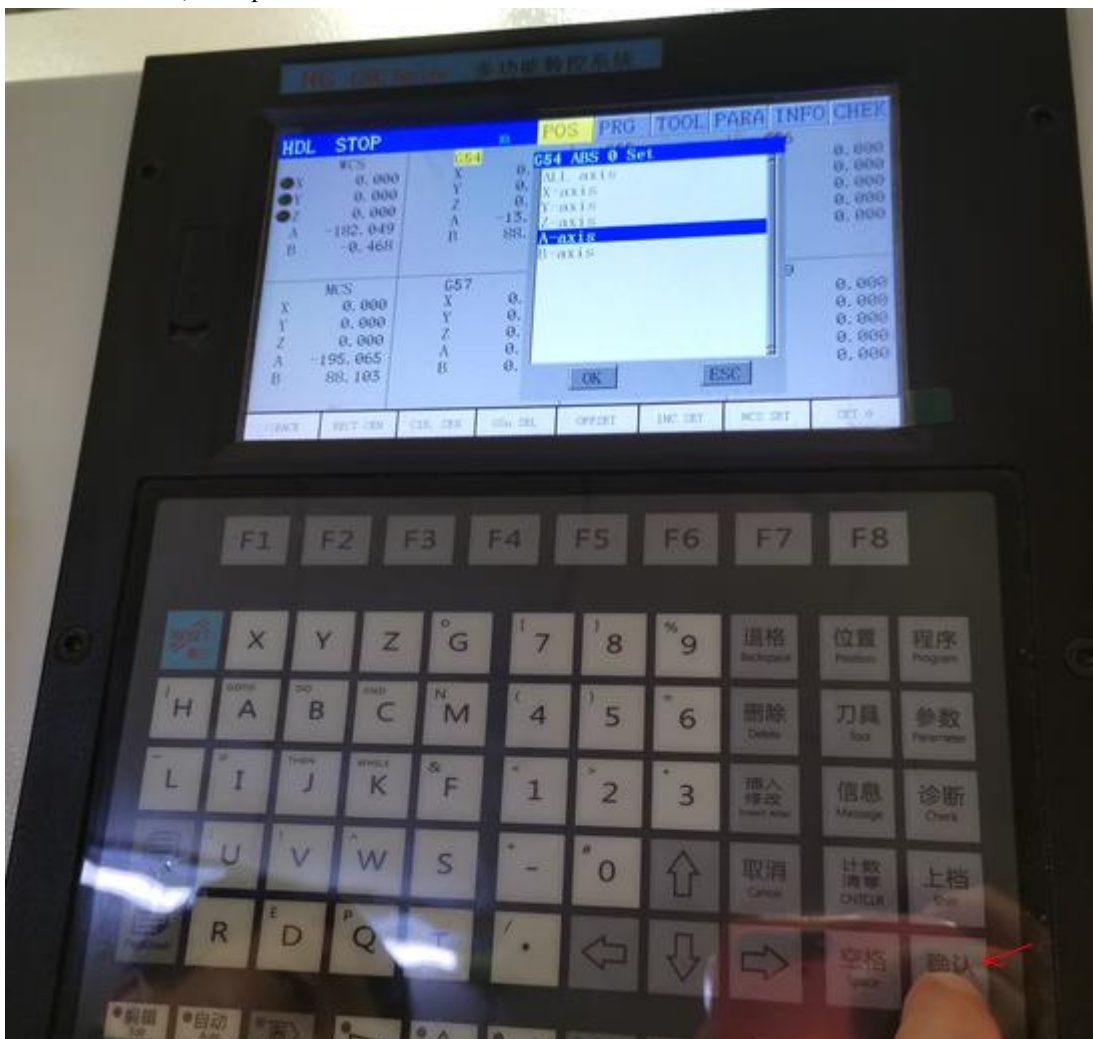
Then click “F8” to set:







Move to A axis , then press “Enter”



You will see A axis parameter copy to system succeed.

HDL	STOP	xi	POS	PRG	TOOL	PARA	INFO	CHEK
WCS		G54	G55	G56				
X	0.000	X 0.000	X 0.000	X 0.000	X	0.000		
Y	0.000	Y 0.000	Y 0.000	Y 0.000	Y	0.000		
Z	0.000	Z 0.000	Z 0.000	Z 0.000	Z	0.000		
A	0.000	A -195.065	A 0.000	A 0.000	A	0.000		
B	-0.468	B 88.571	B 0.000	B 0.000	B	0.000		
MCS		G57	G58	G59				
X	0.000	X 0.000	X 0.000	X 0.000	X	0.000		
Y	0.000	Y 0.000	Y 0.000	Y 0.000	Y	0.000		
Z	0.000	Z 0.000	Z 0.000	Z 0.000	Z	0.000		
A	-195.065	A 0.000	A 0.000	A 0.000	A	0.000		
B	88.103	B 0.000	B 0.000	B 0.000	B	0.000		
<<BACK		RECT CEN	CIR. CEN	G5n SEL	OFFSET	INC SET	WCS SET	SET 0.

The same way for B axis, press "F8" to set, choose B axis then press "Enter", then you will see B axis parameter copied to system succeed:

HDL	STOP	xi	POS	PRG	TOOL	PARA	INFO	CHEK
WCS		G54	G55	G56				
X	0.000	X 0.000	X 0.000	X 0.000	X	0.000		
Y	0.000	Y 0.000	Y 0.000	Y 0.000	Y	0.000		
Z	0.000	Z 0.000	Z 0.000	Z 0.000	Z	0.000		
A	0.000	A 195.065	A 0.000	A 0.000	A	0.000		
B	0.000	B 88.103	B 0.000	B 0.000	B	0.000		
MCS		G57	G58	G59				
X	0.000	X 0.000	X 0.000	X 0.000	X	0.000		
Y	0.000	Y 0.000	Y 0.000	Y 0.000	Y	0.000		
Z	0.000	Z 0.000	Z 0.000	Z 0.000	Z	0.000		
A	-195.065	A 0.000	A 0.000	A 0.000	A	0.000		
B	88.103	B 0.000	B 0.000	B 0.000	B	0.000		
<<BACK		RECT CEN	CIR. CEN	G5n SEL	OFFSET	INC SET	WCS SET	SET 0.

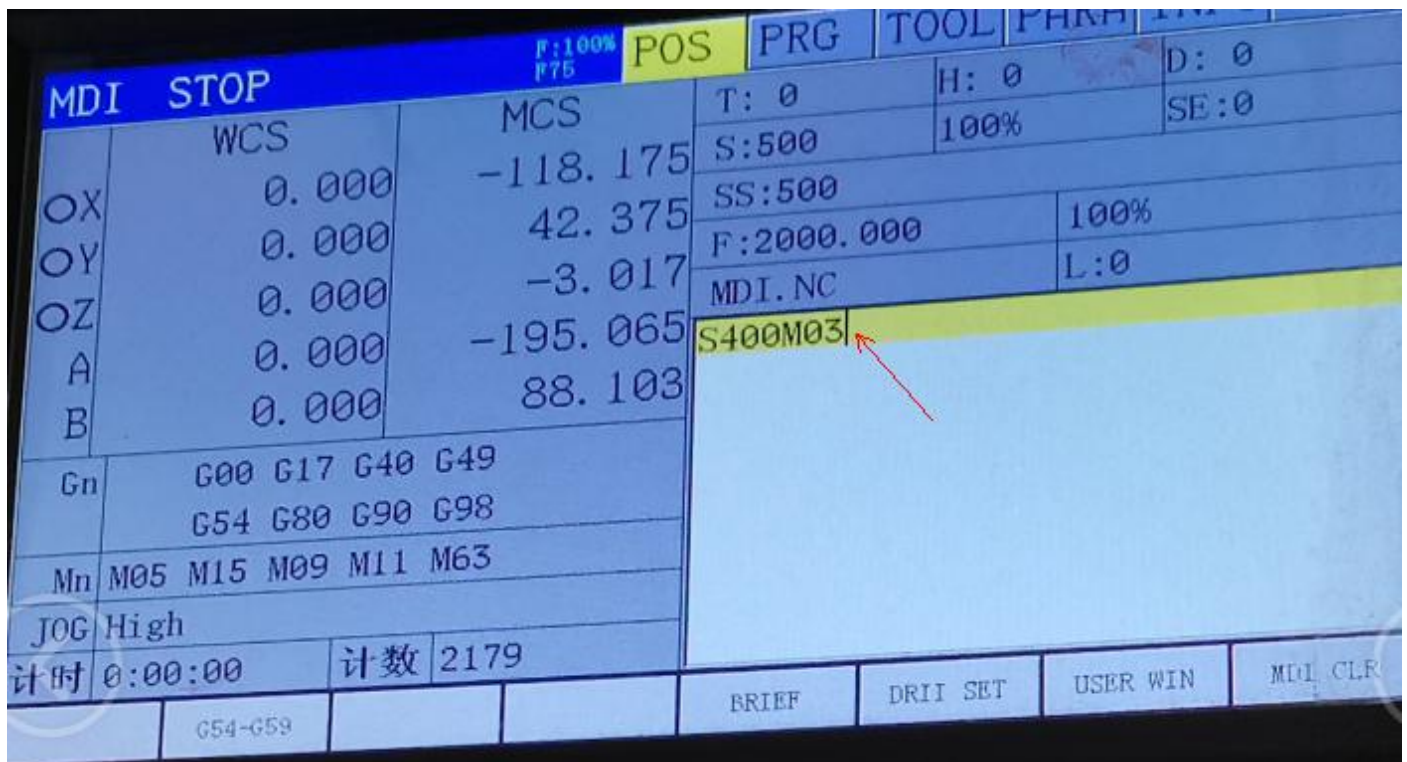
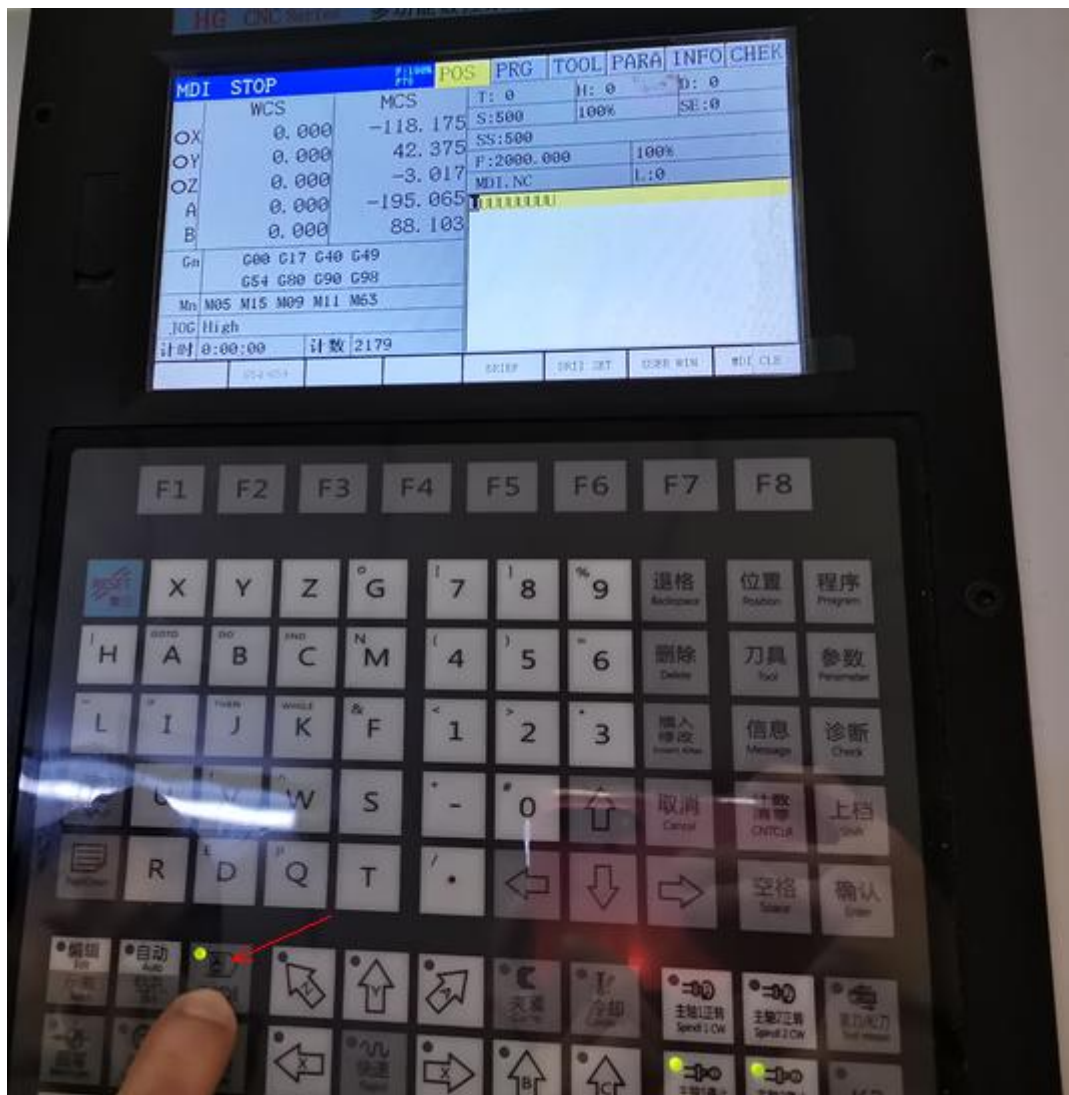
#### 4. Center point location:

Install edge finder tool:



Press “MDI” key, input S400M03, when using edge finder, the speed should be between 400-600RPM.



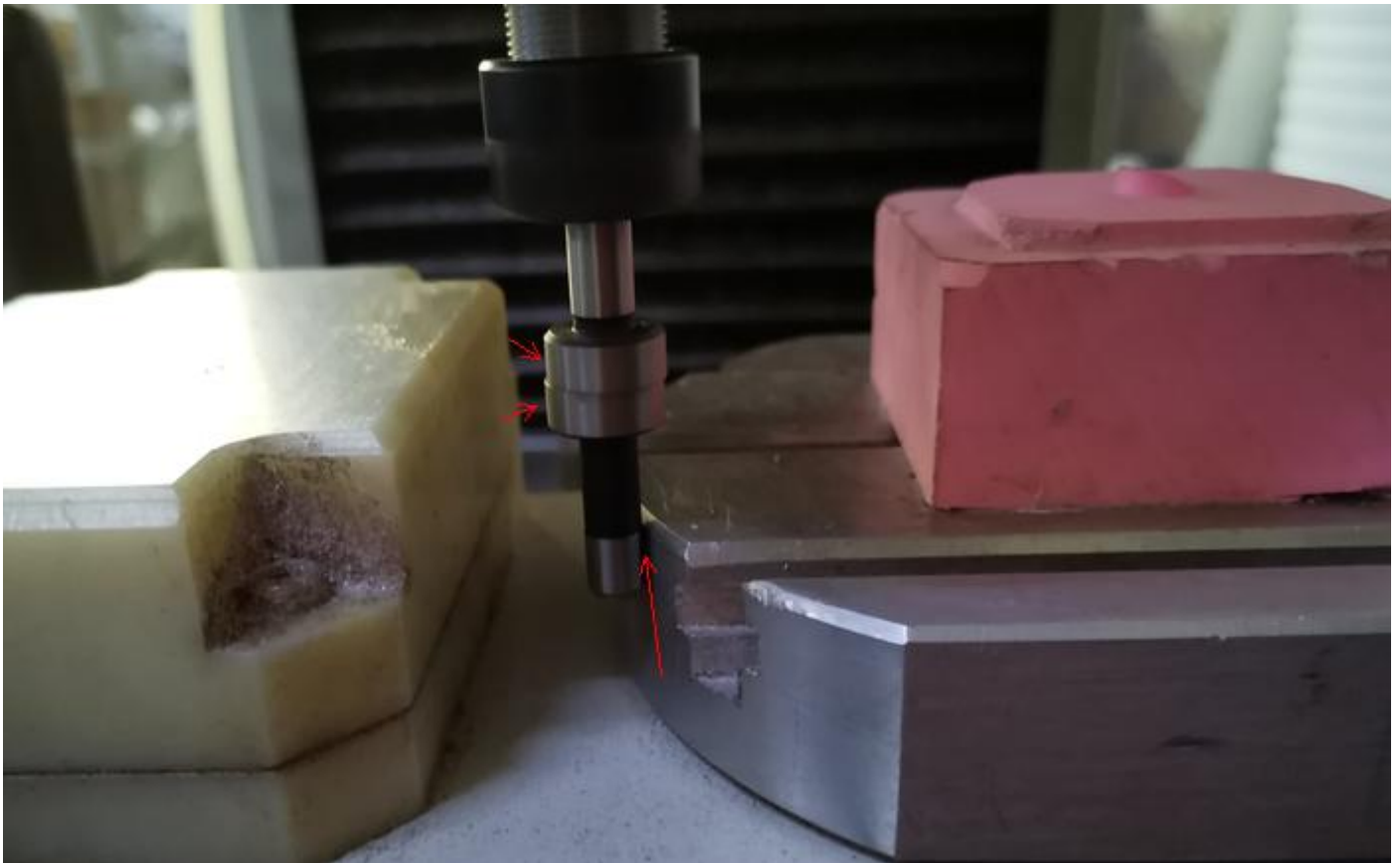


Then press "Cycle start" to run.



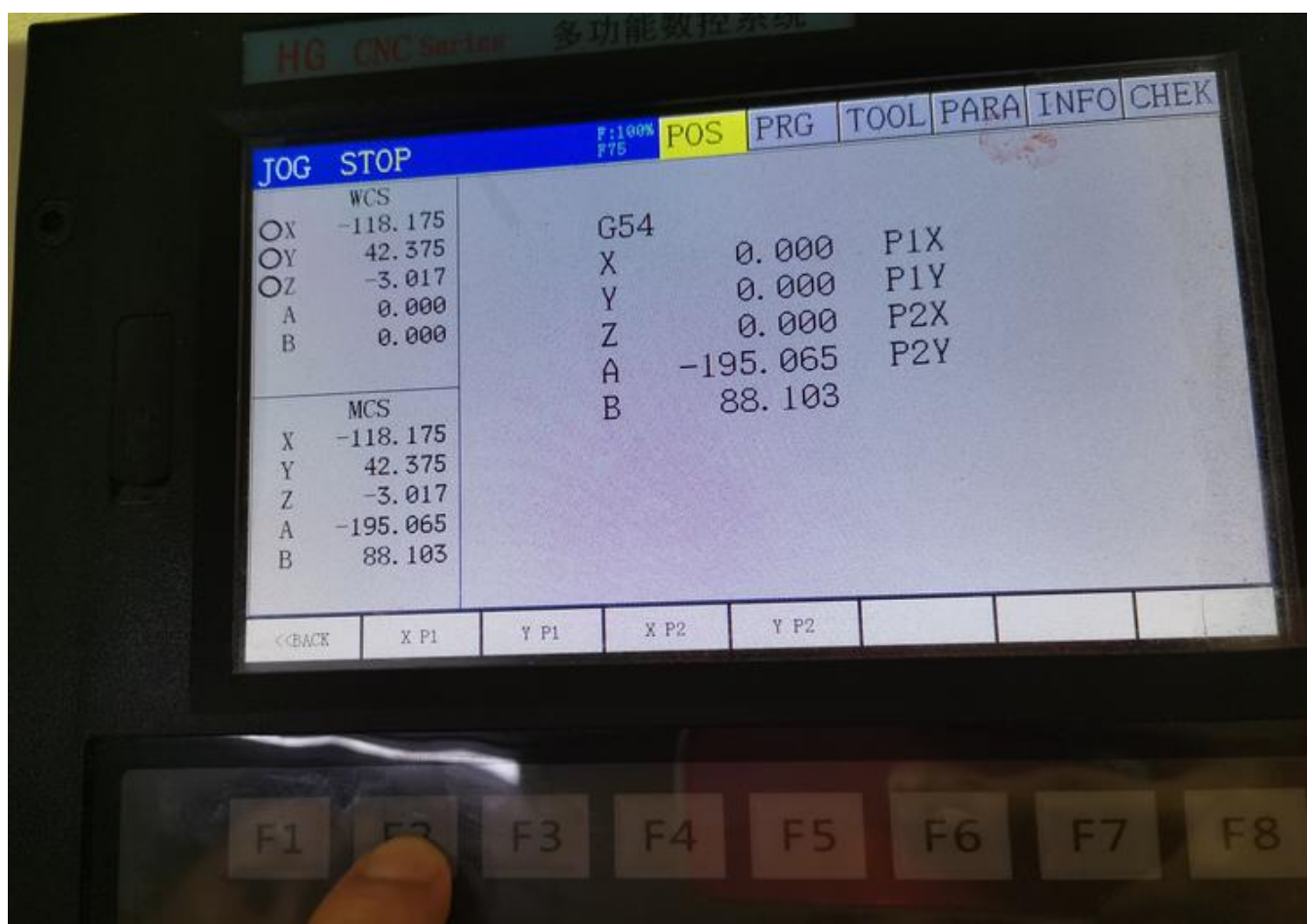
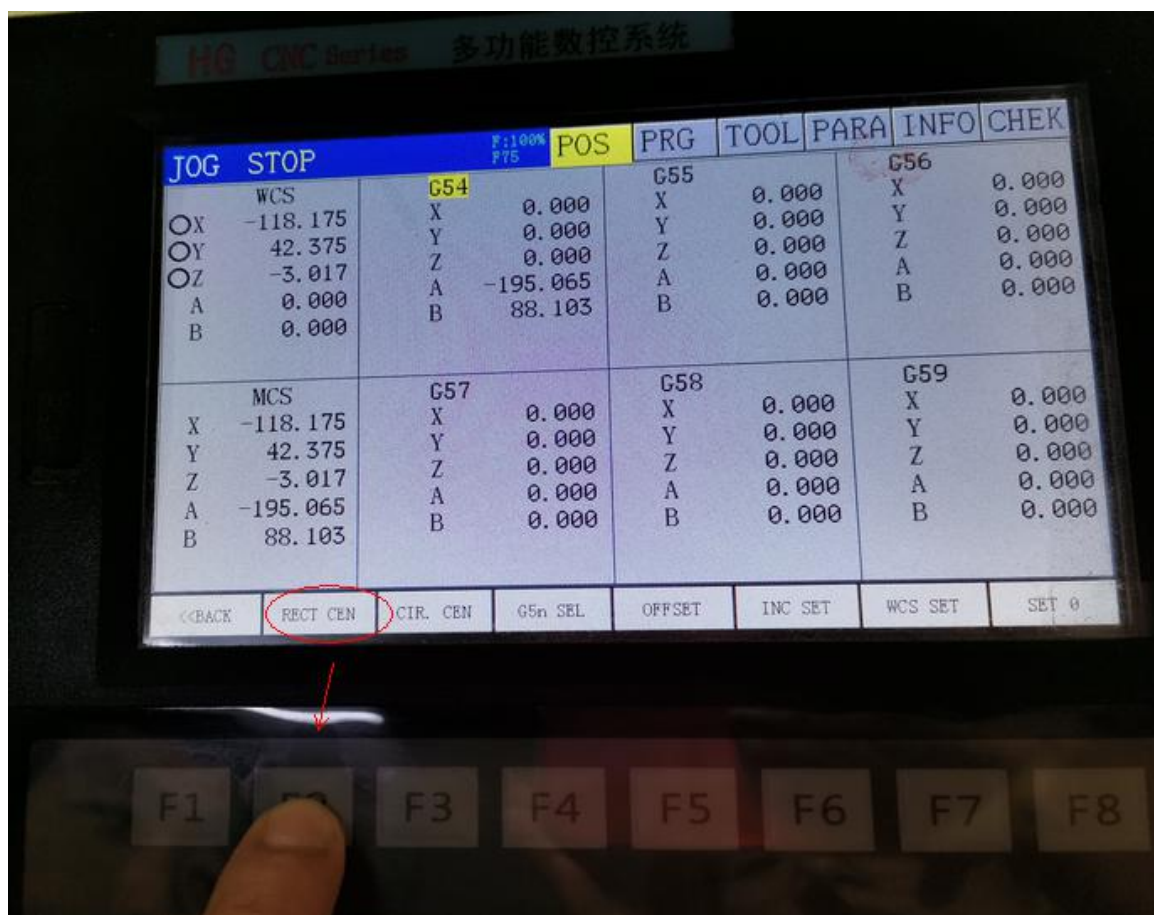


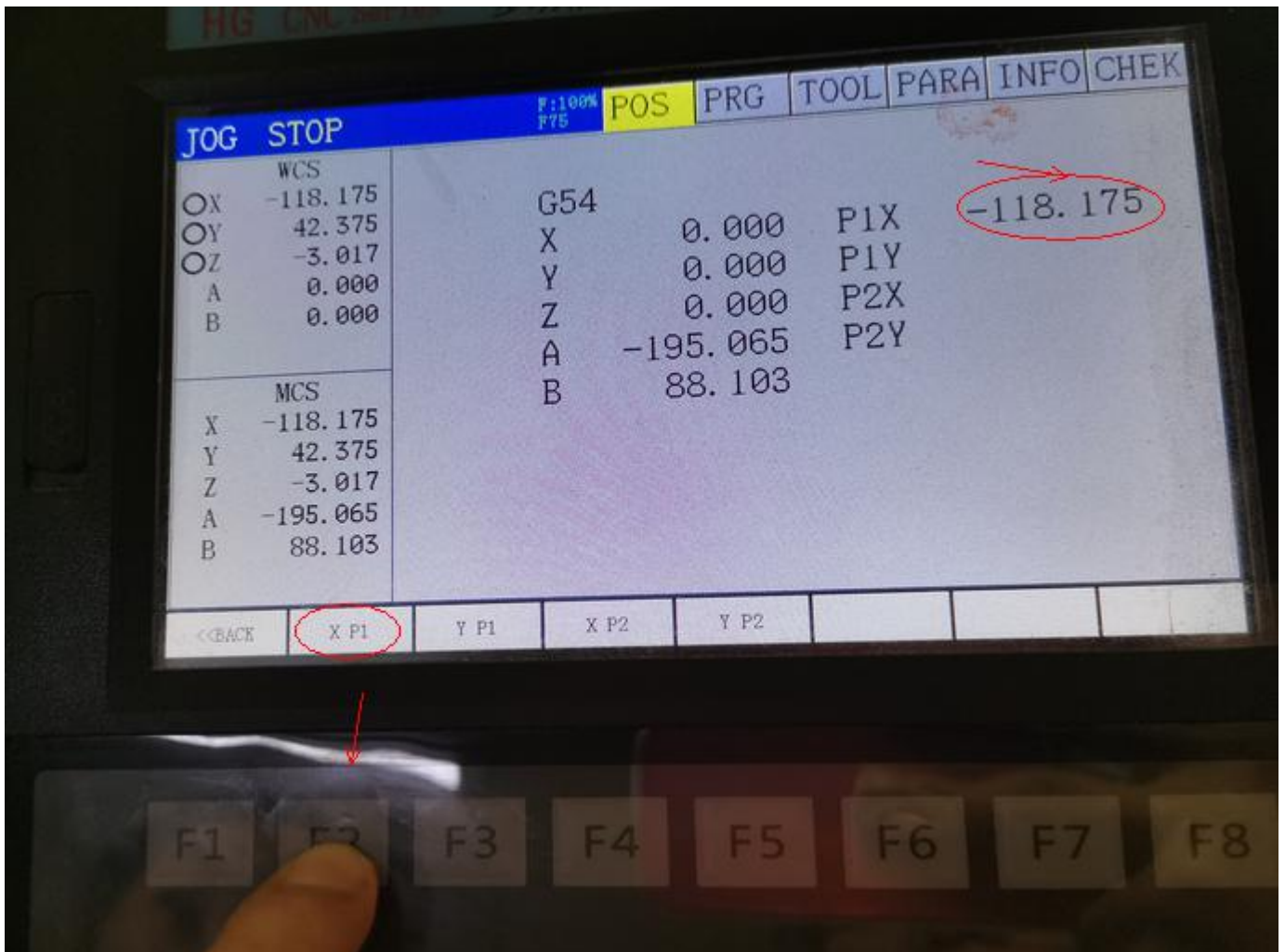
Move the axis to make the edge finder touching the machine table as picture, when it touched, you will see the two parts of the edge finder staggered.



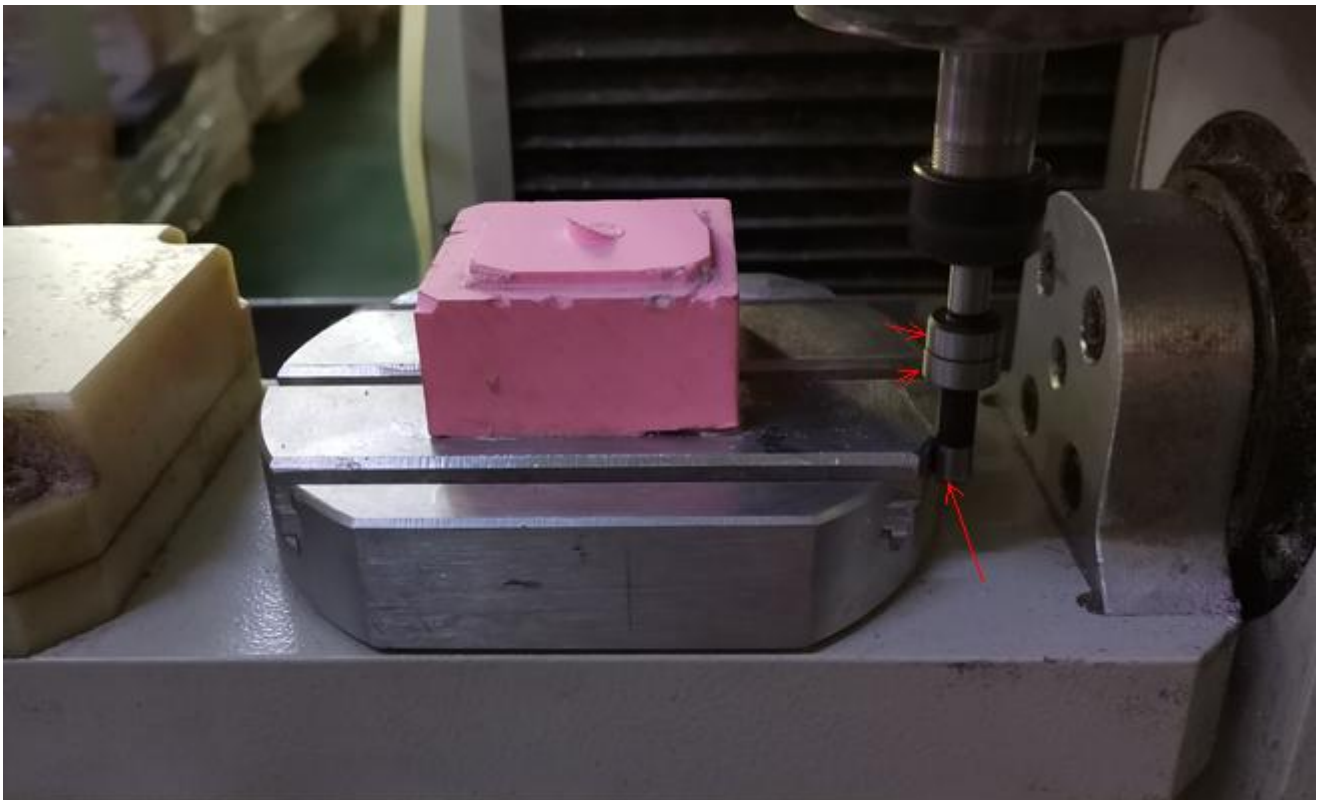
Record this parameter to system as following steps:

Press "F2" to RECT CEN, keep pressing "F2" till you see X P1, then still press "F2" under X P1, parameter will be copied.

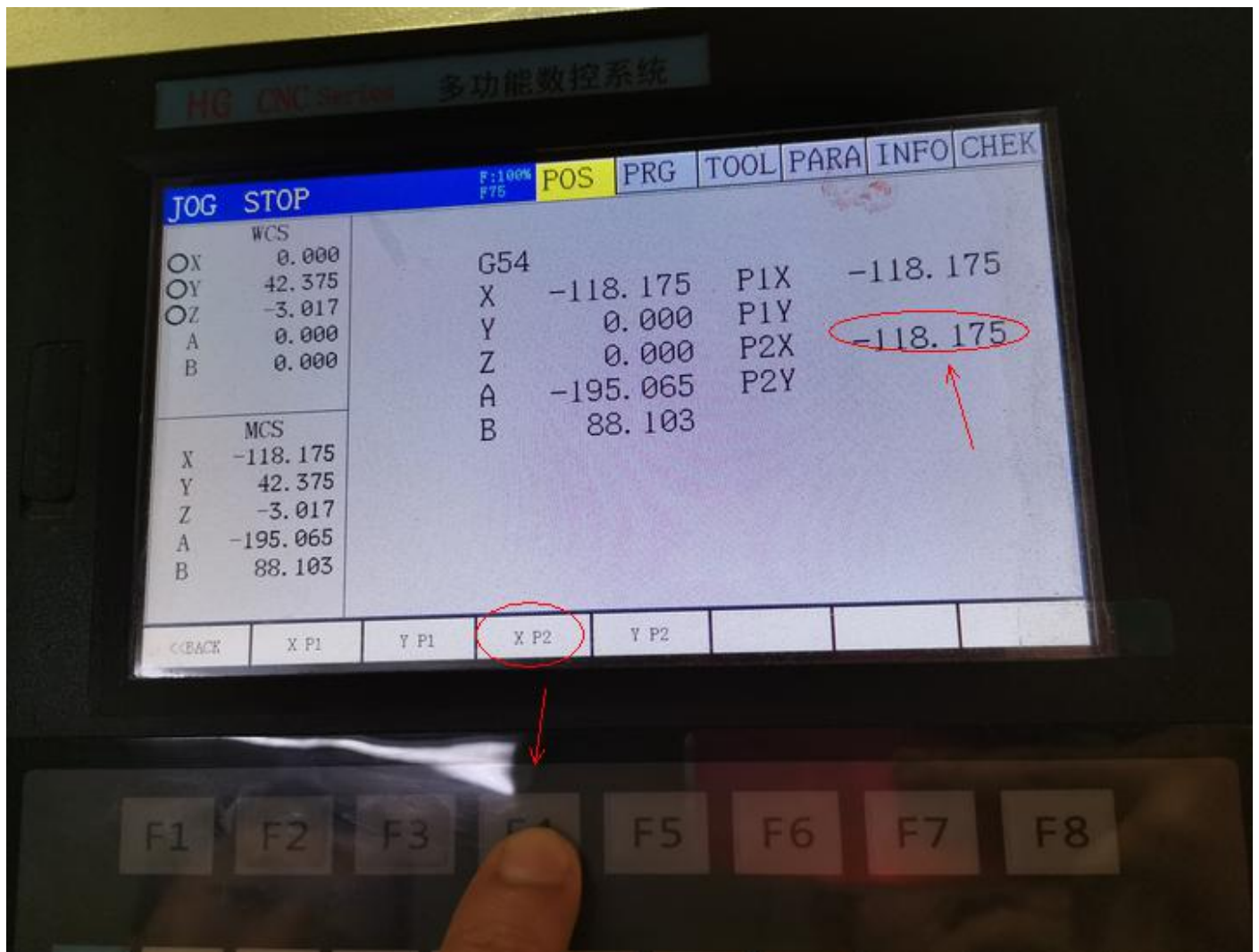




Then use the same way, move X axis to make edge finder touch another side of table, record this parameter by pressing “F4” under XP2.

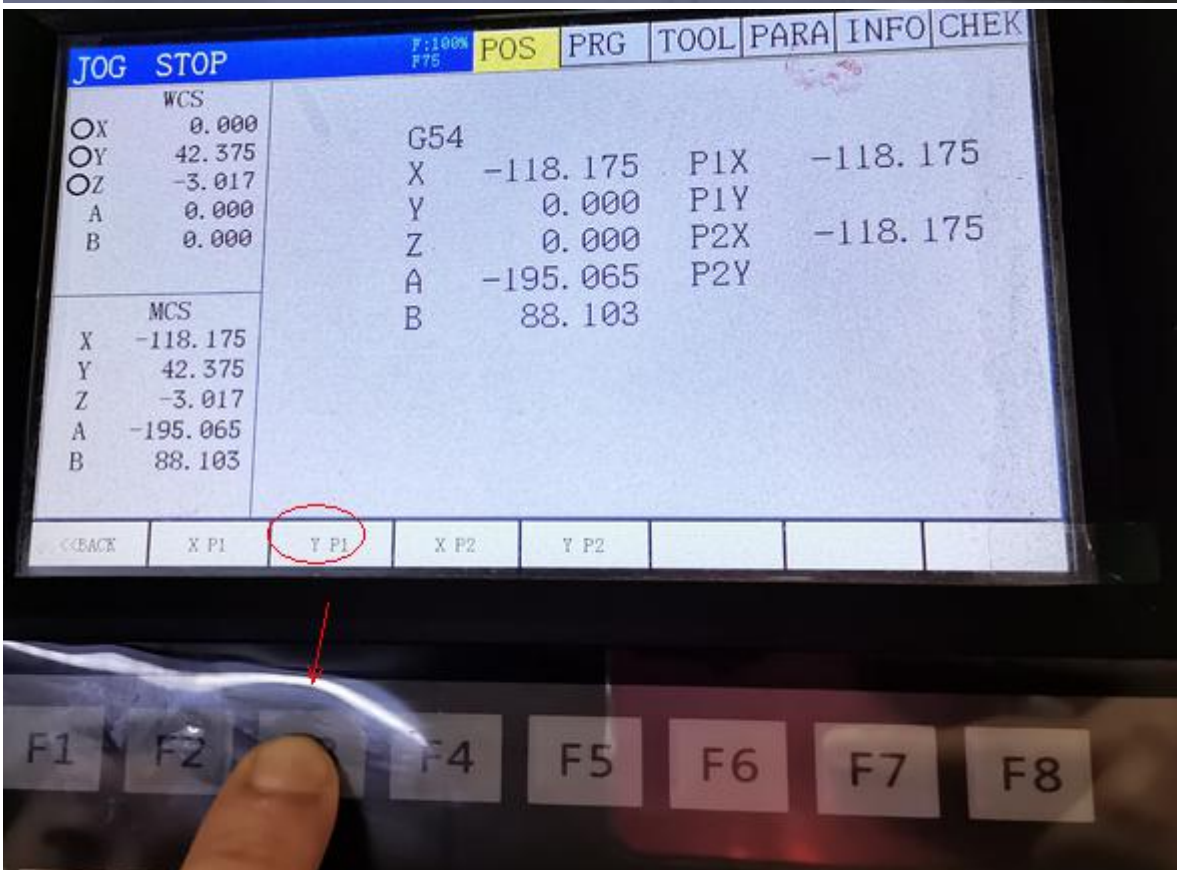




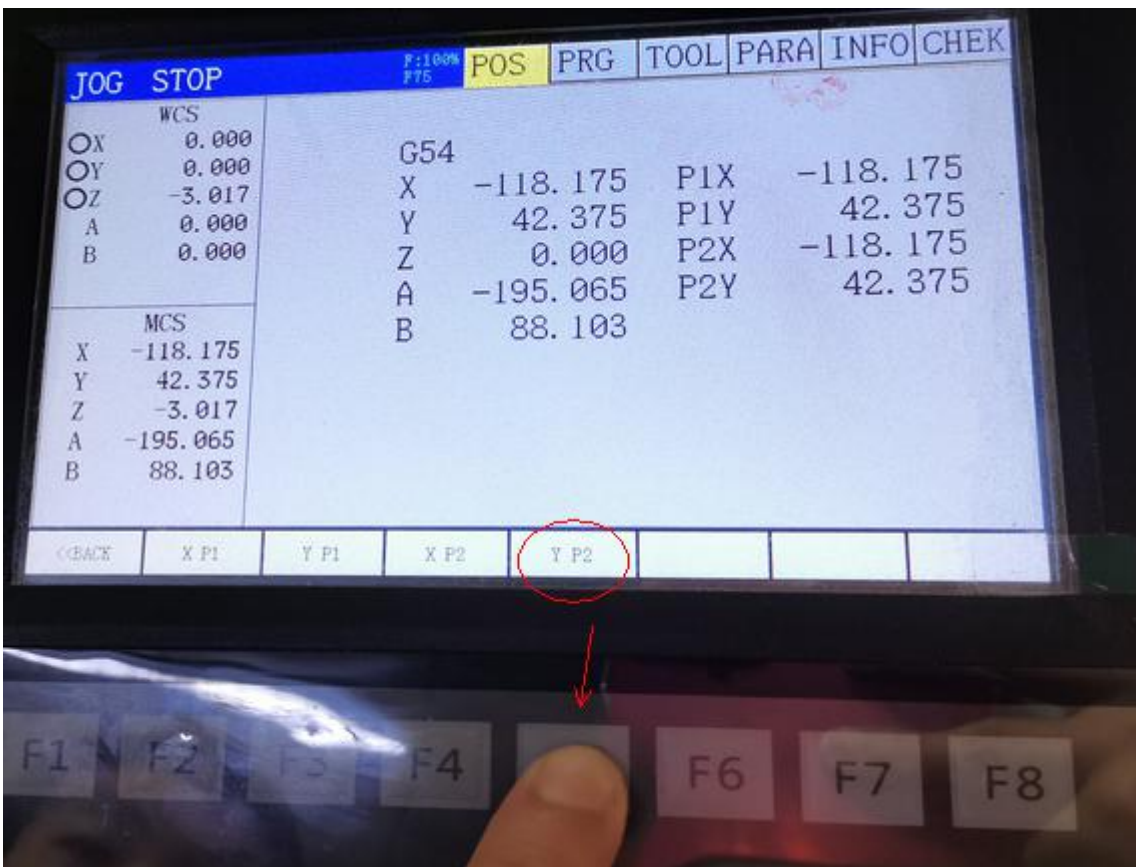


The same way for Y P1:

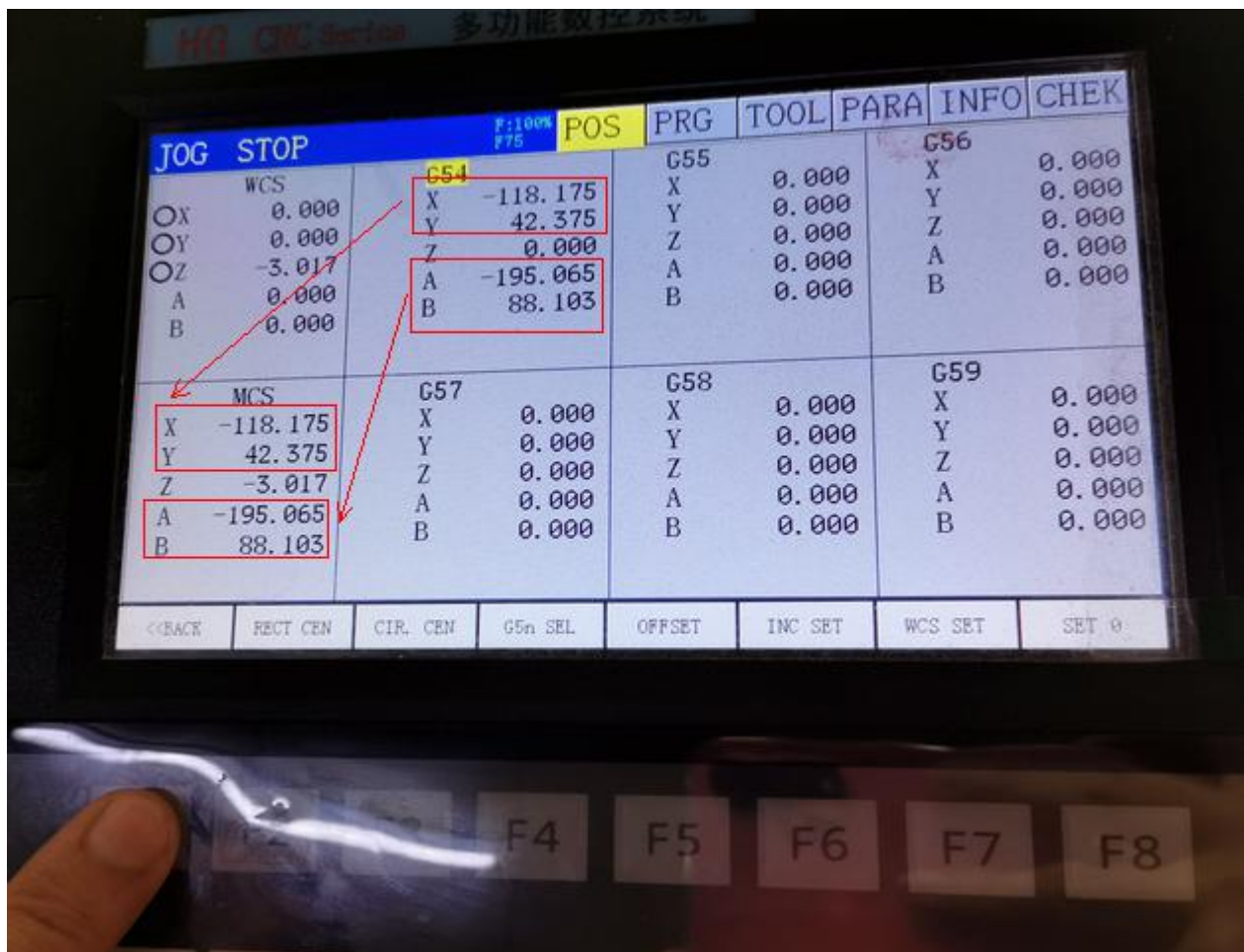




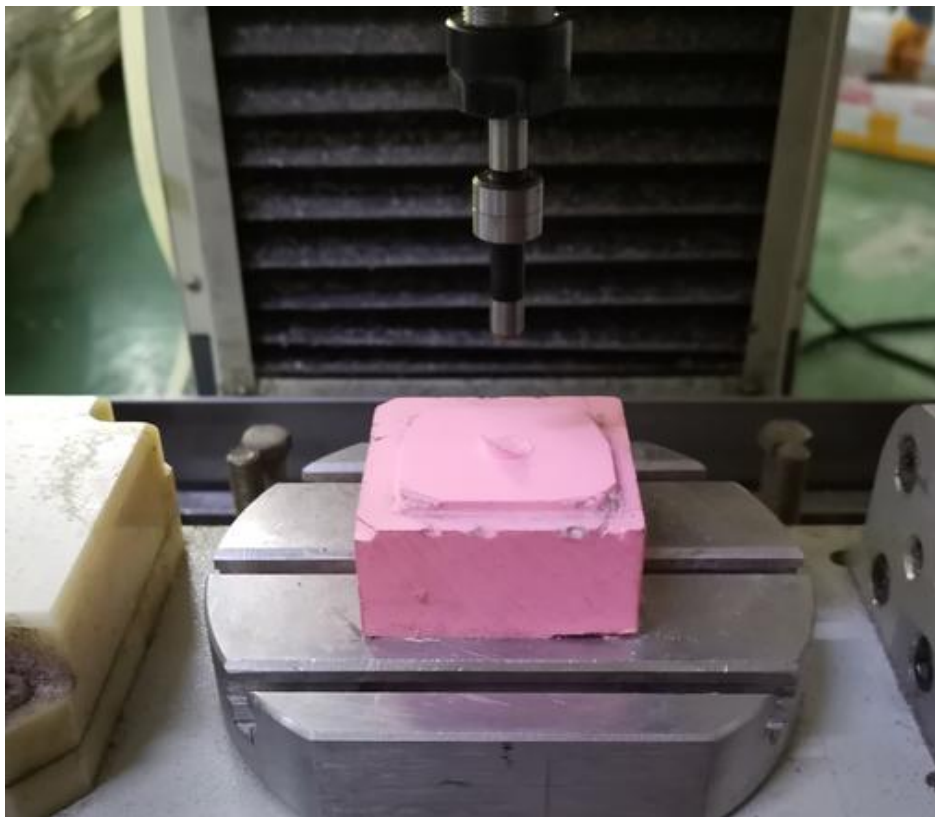
Y P2:



Press "F1" to get Back, you will see XYAB coordinate parameters on G54 are the same as MCS.



Move spindle to the center point by handwheel, working piece center point should be the same as the spindle:

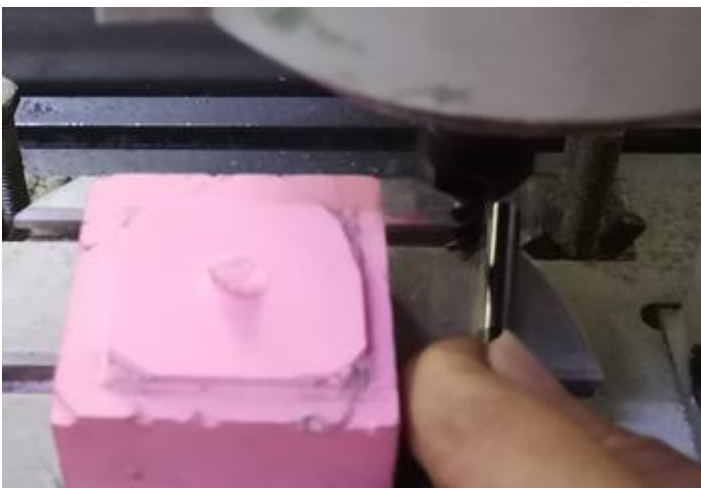
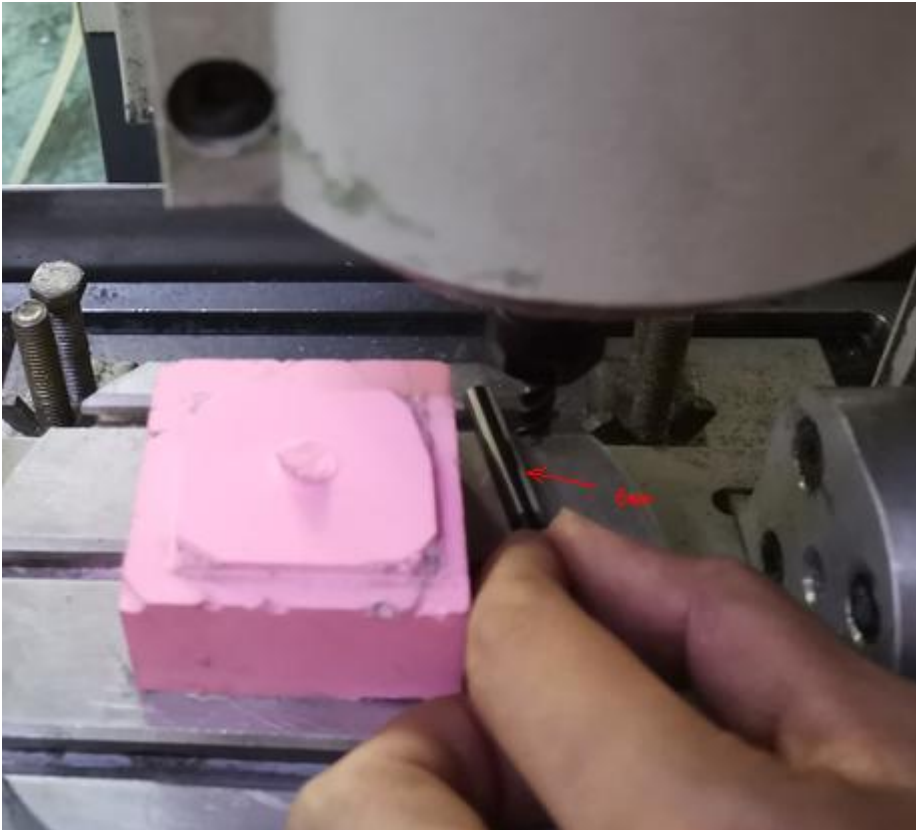




## 5. Tool setting

First install the tool you are going to use:

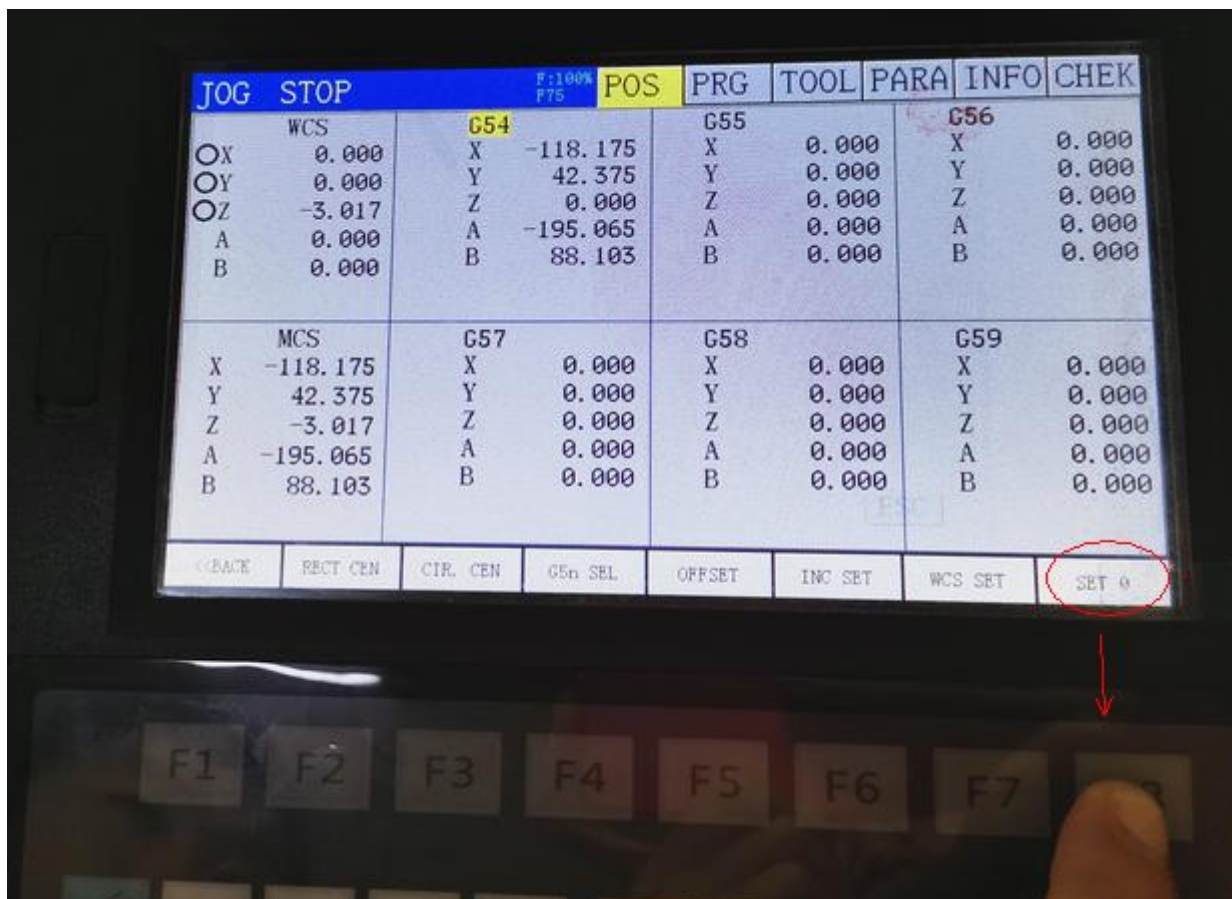
Move axis to make the tool tip above the table with a distance which a 6mm( just for example, you can use other size) diameter object just can pass through.



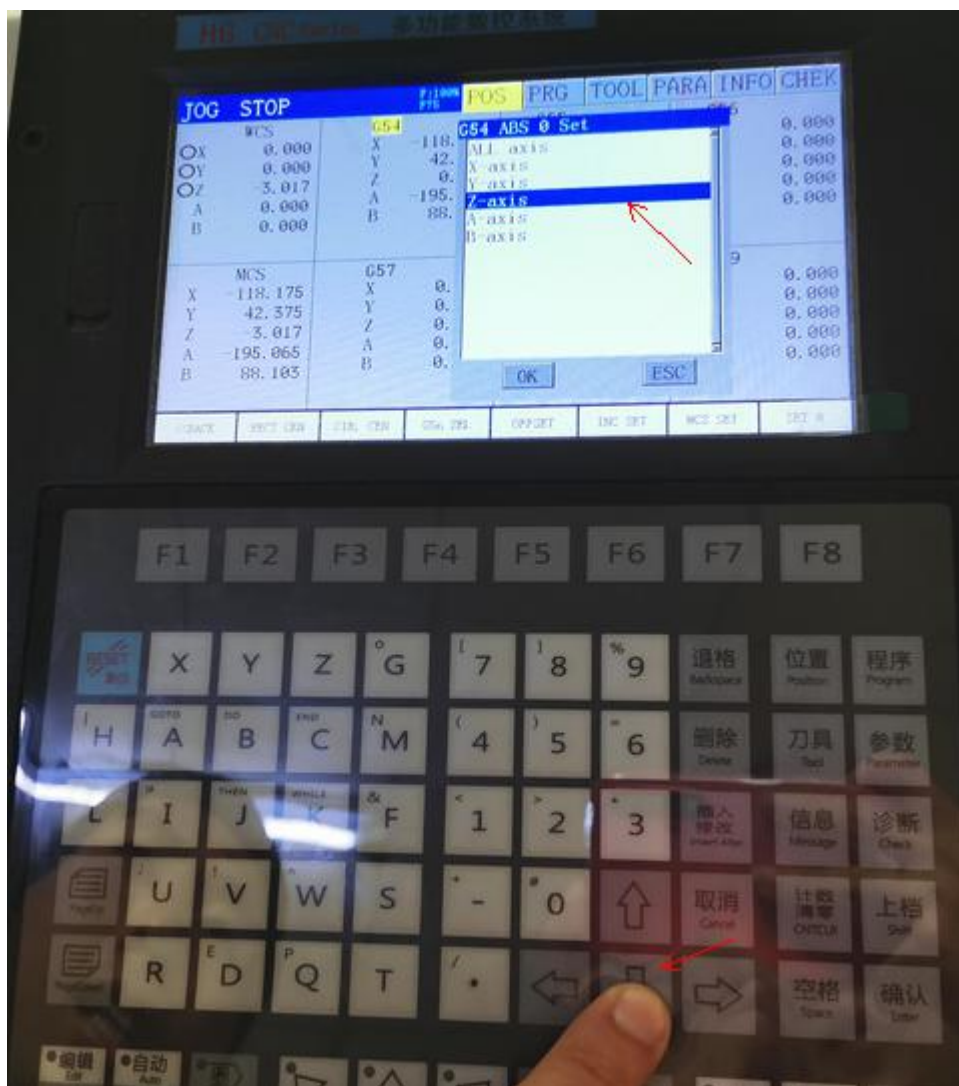
Record this parameter to system:

Press “F8” to set

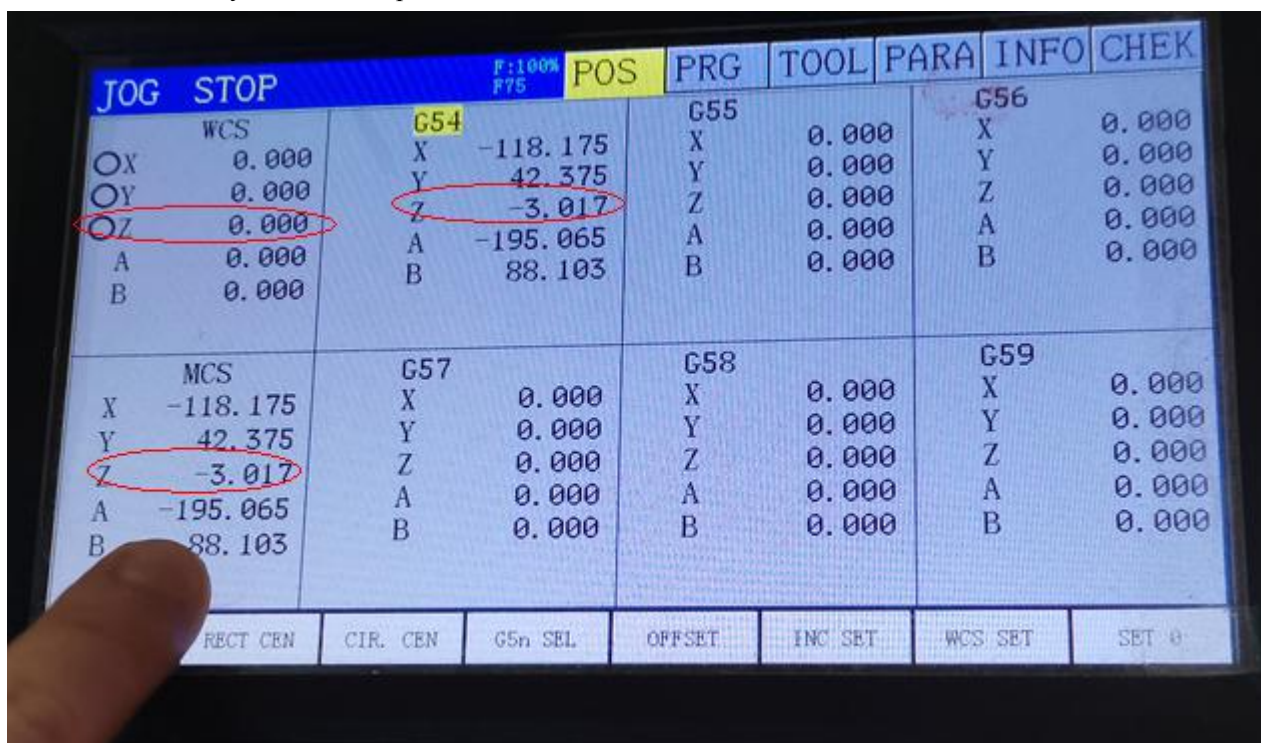




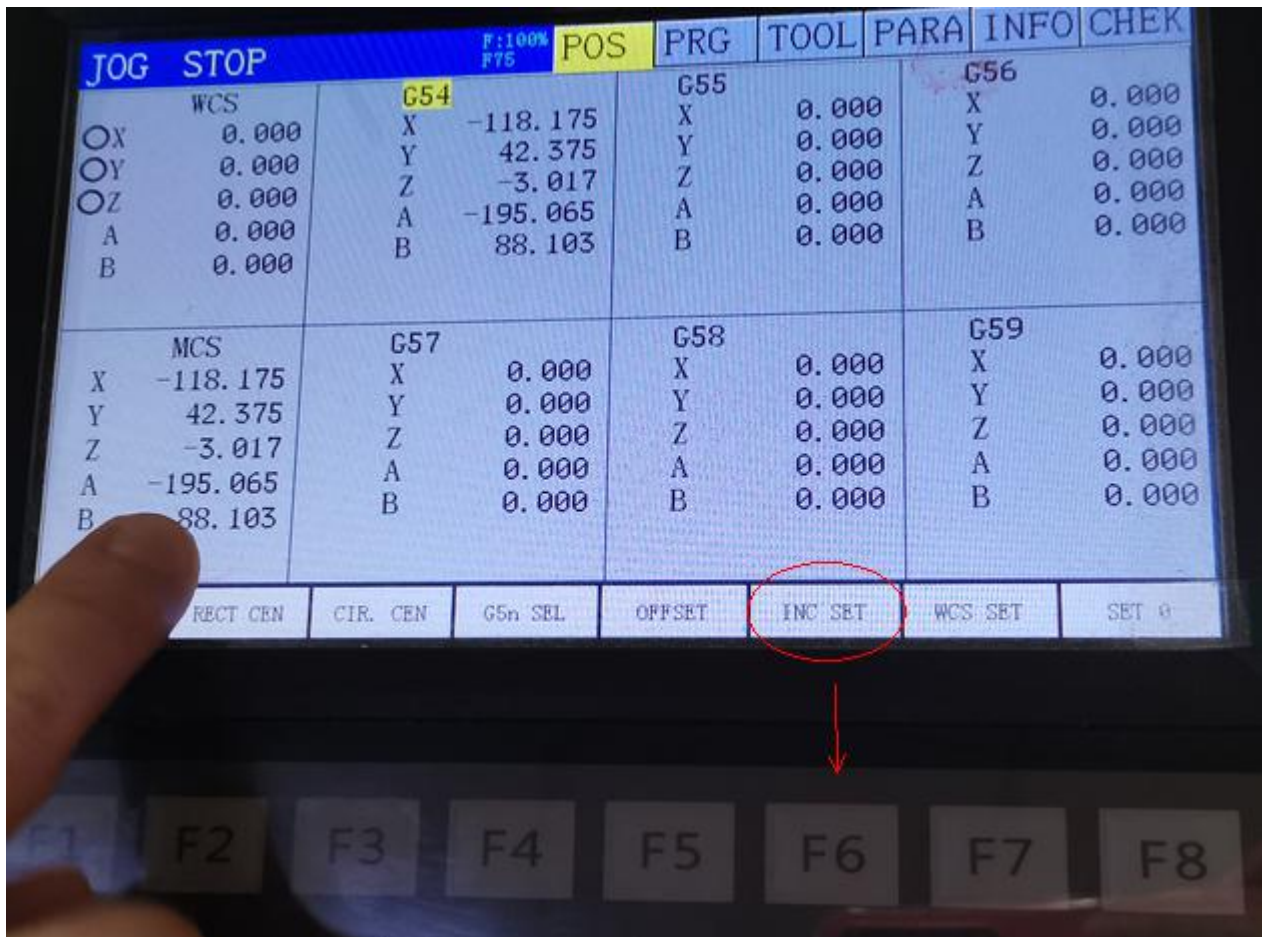
Choose Z axis:



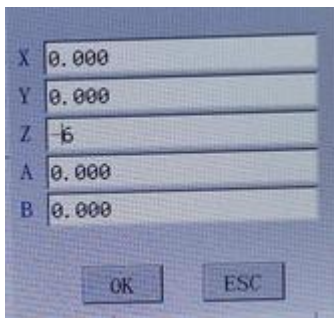
Then Press "Enter", you will see Z parameter in G 54 is the same as MCS, and Z in WCS turn to 0.



At last, press "F6" to set INC SET



Input “-6” for Z axis

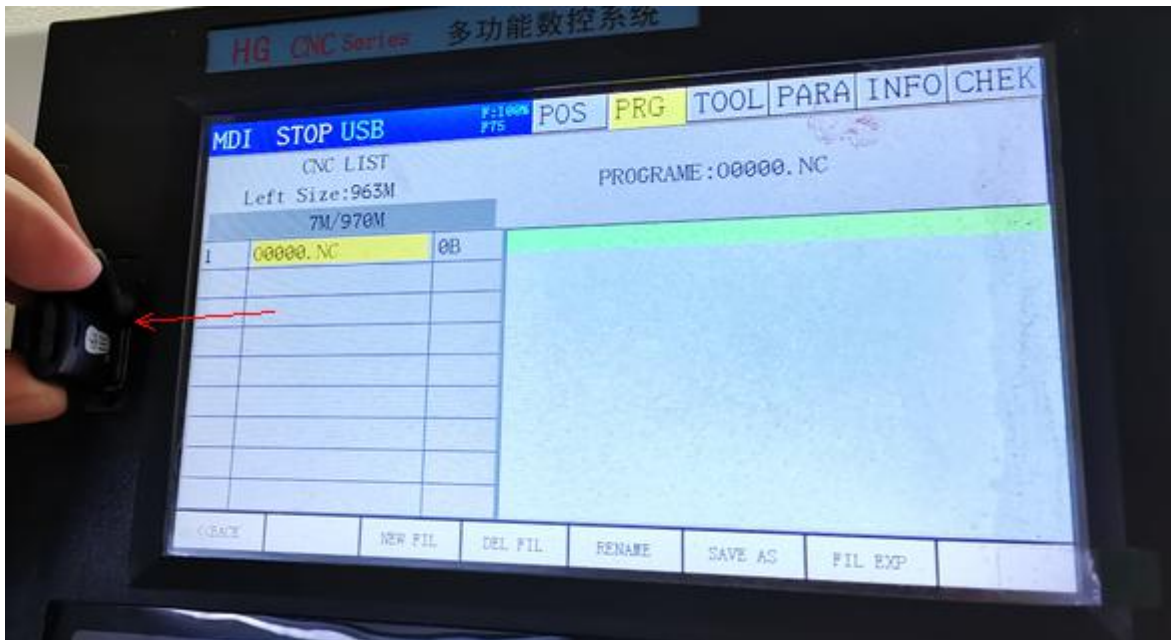


Then press “Enter”, according to above parameter, Z axis parameter “0.000”on WCS will change to “6.000”, on G54 “-3.017” will change to “-9.017”, MCS Z axis parameter will be the same as “-3.017)

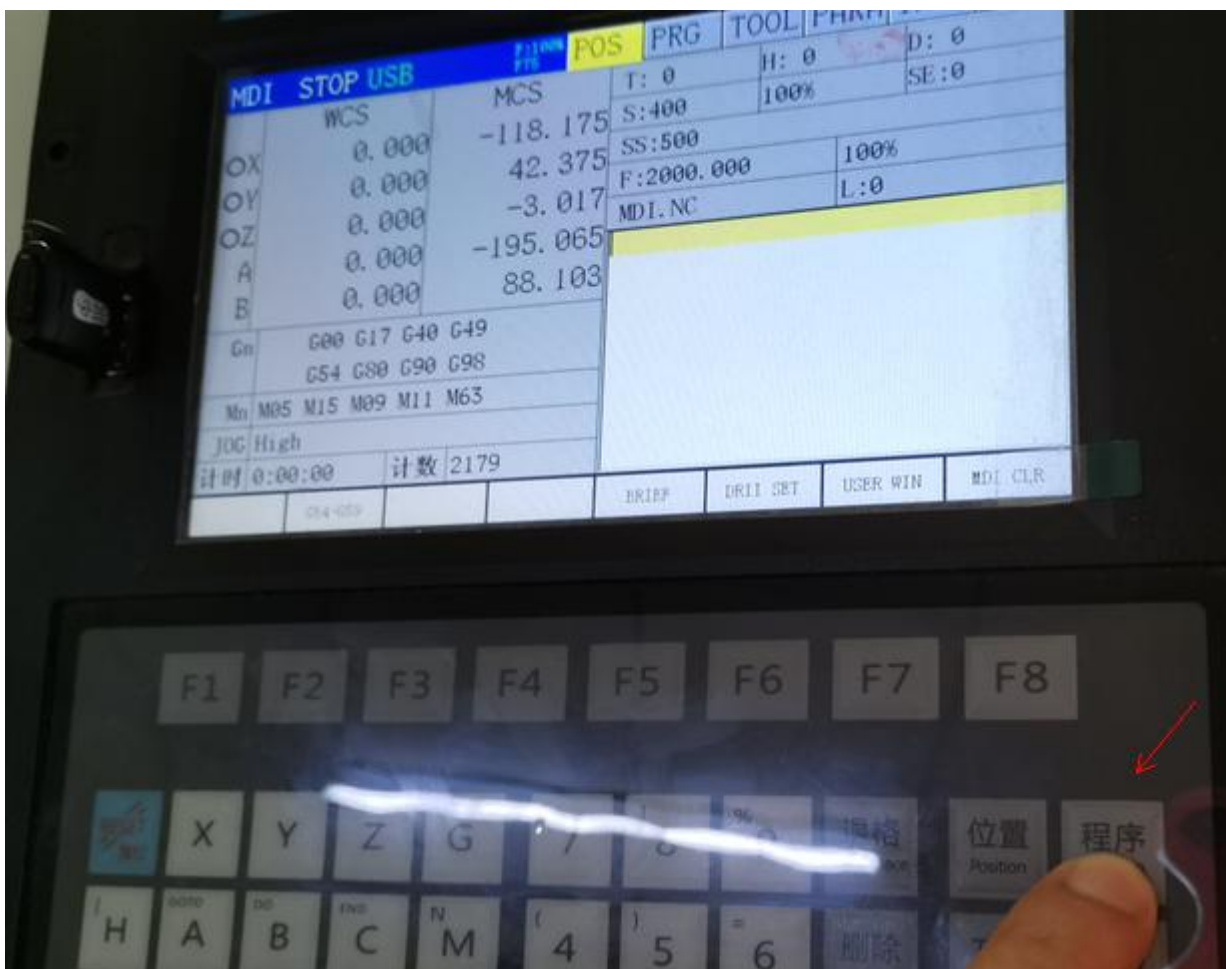
## 6. Load G code

Copy your G codes into a USB driver and connect to the controller system

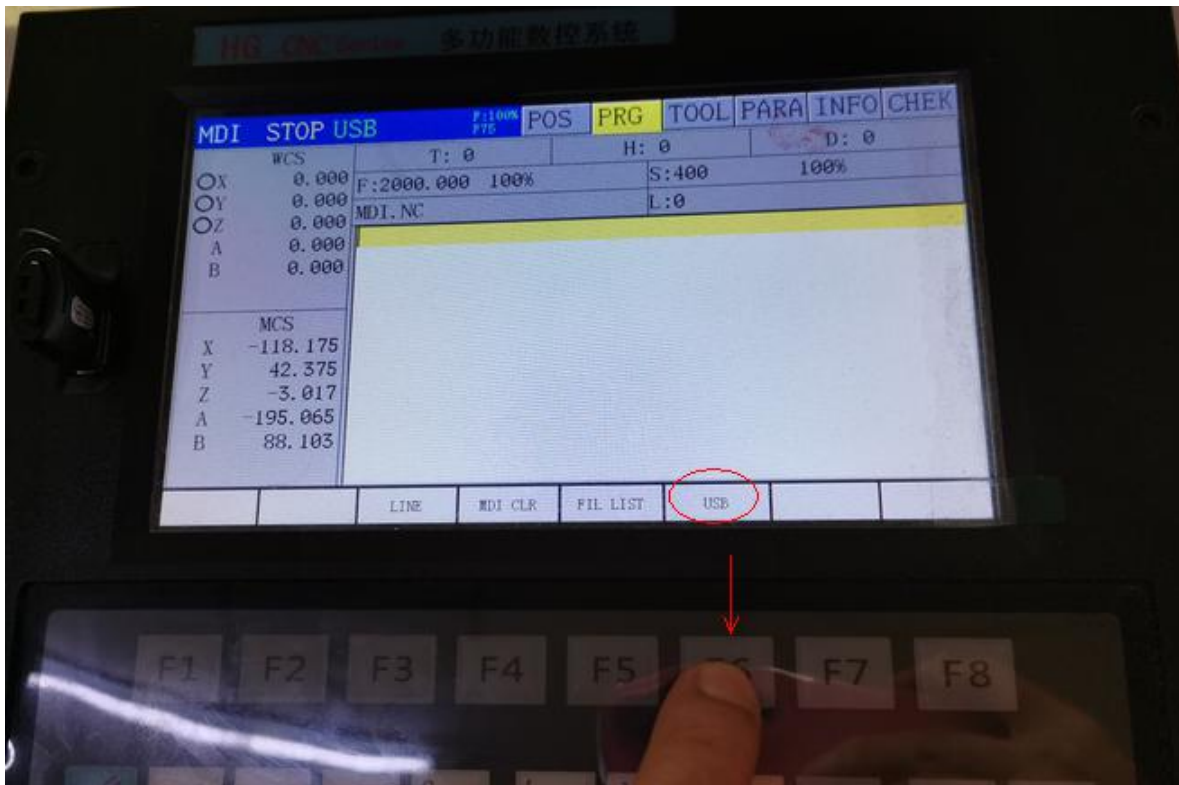




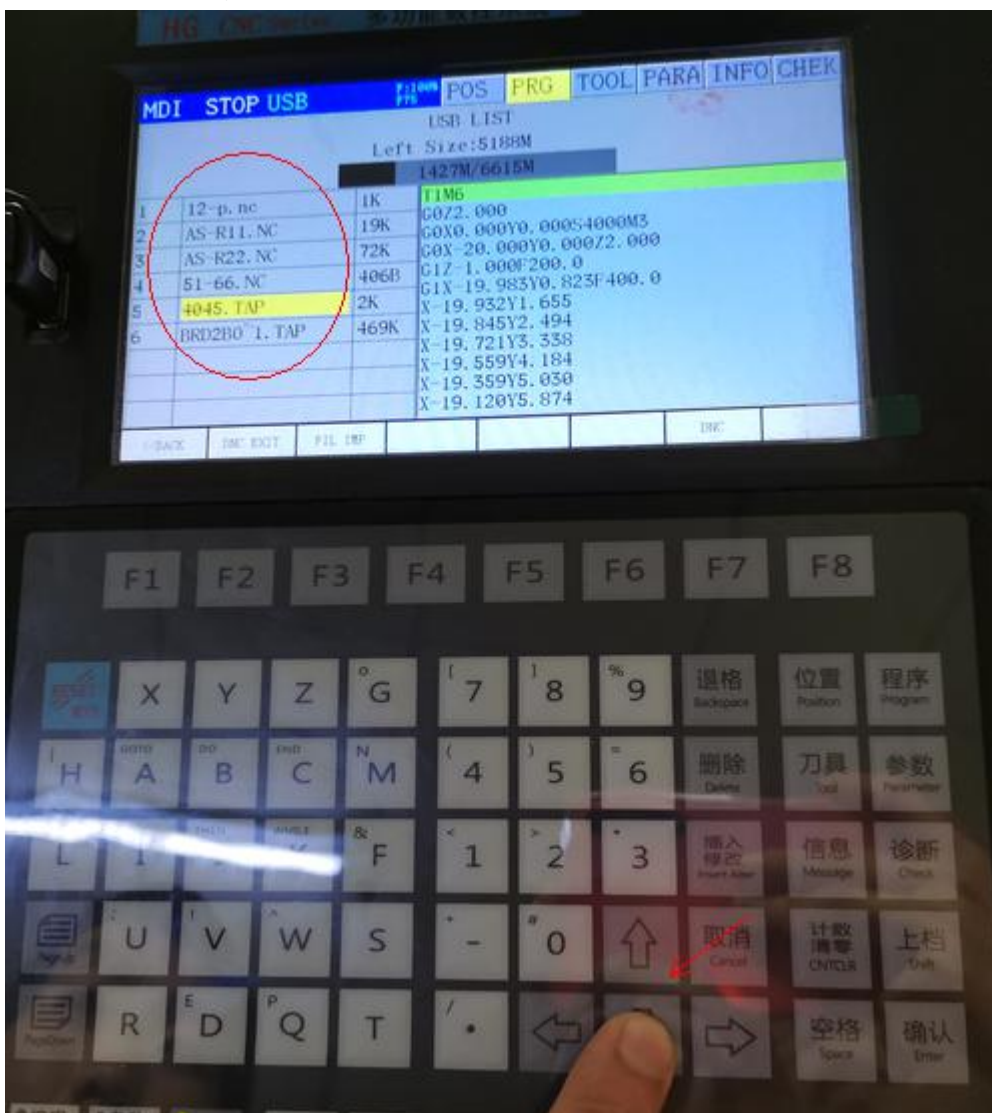
Press "Program"



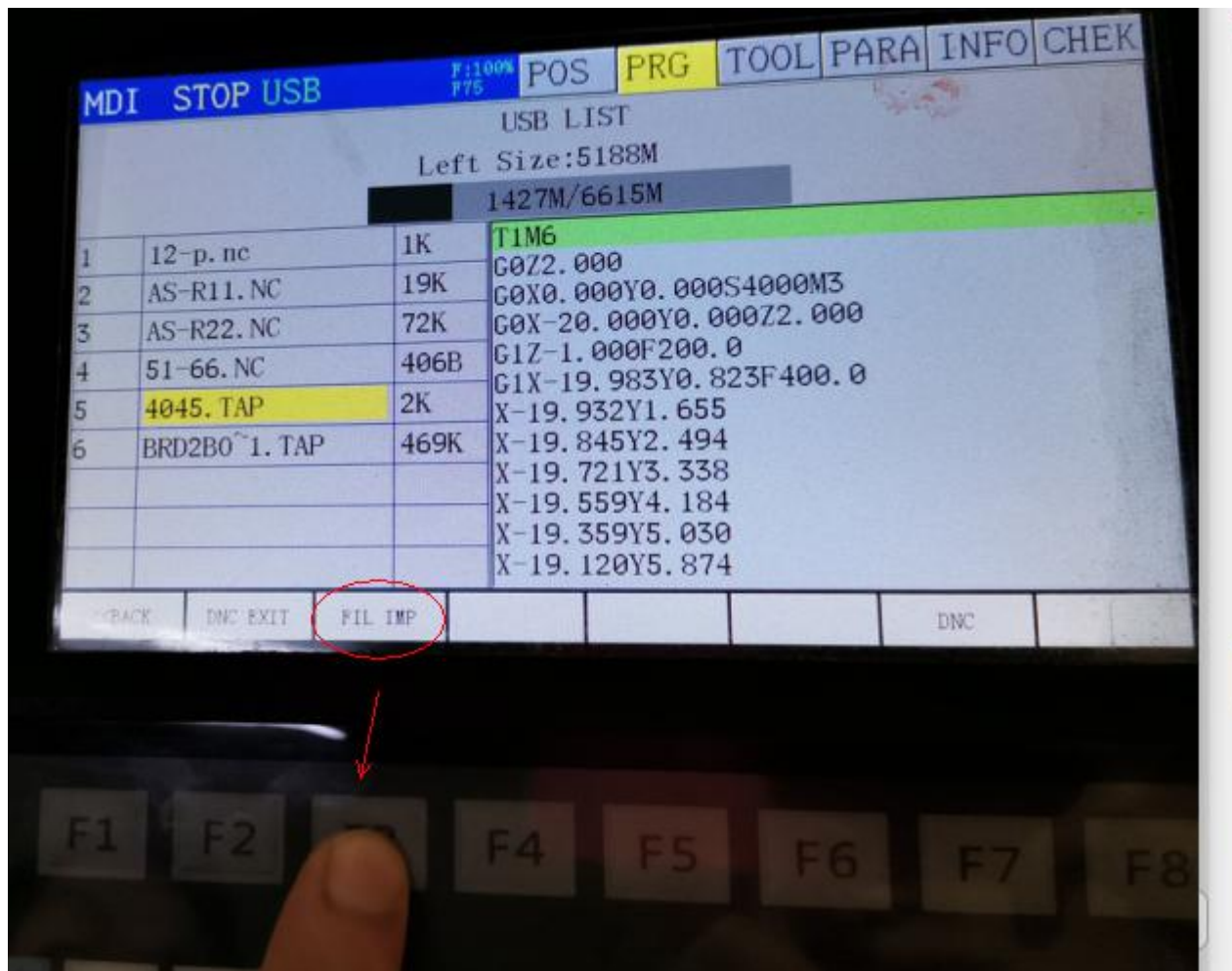
Press "F6" to choose USB:



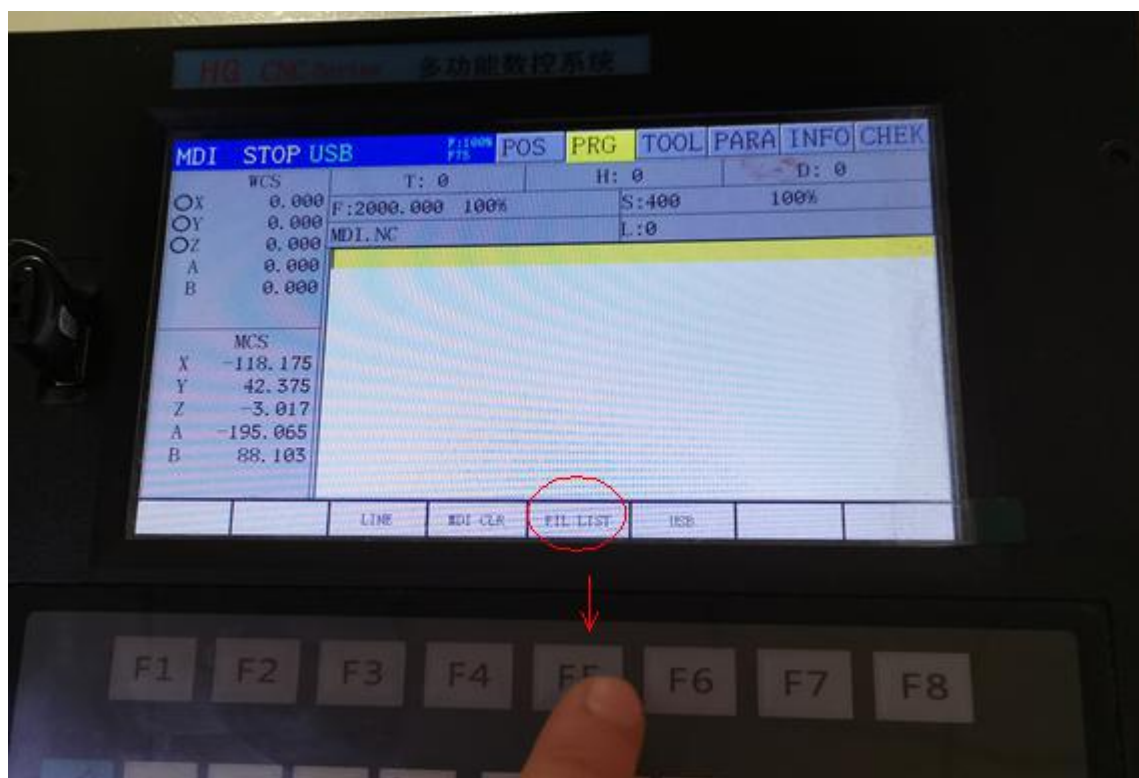
Choose the G code you named:



Press "F3" to import file:

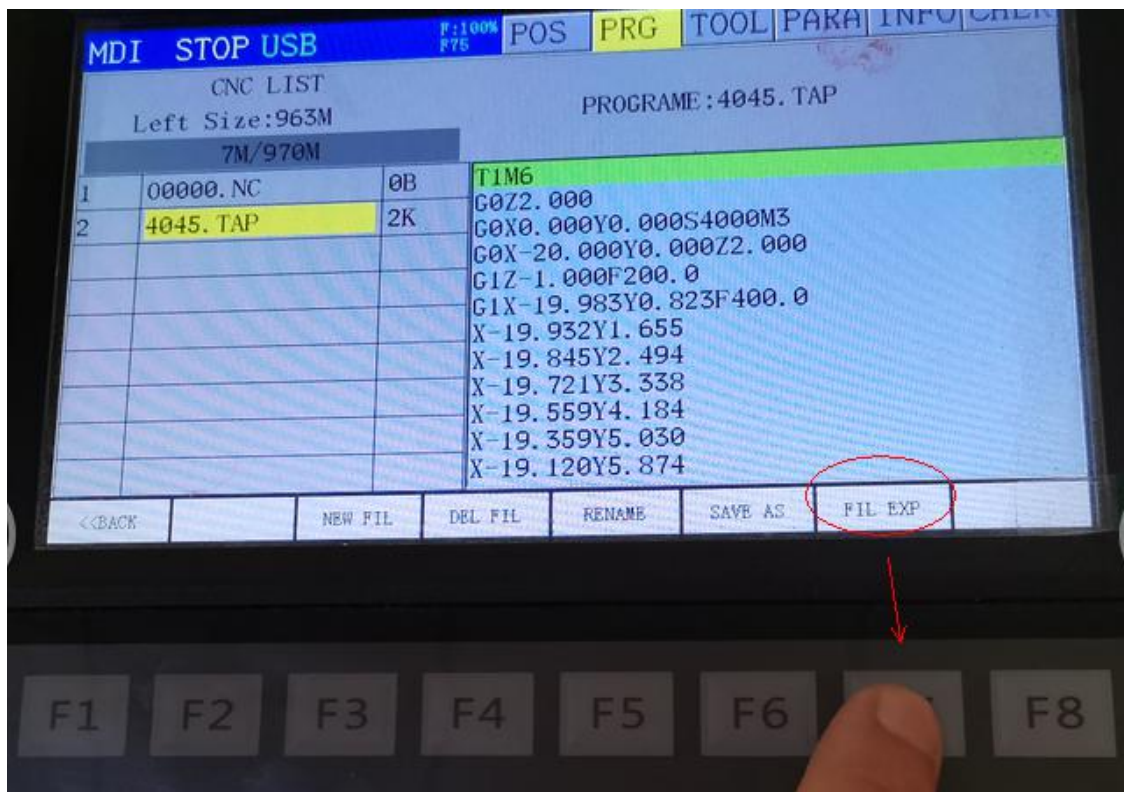


Then Press "F1" to get back and find FIL LIST, press "F5"

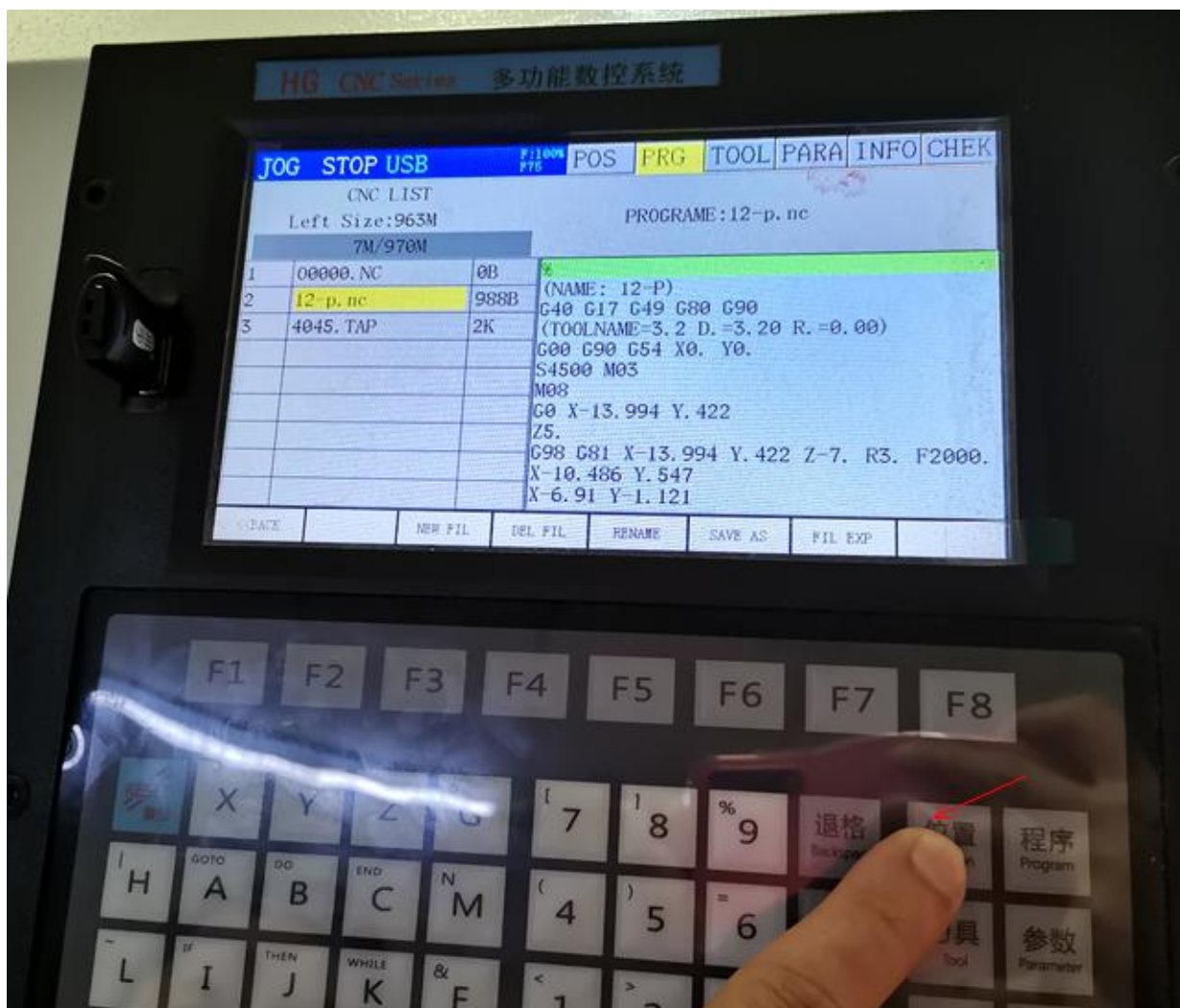


Find the file you imported and press "F7" to export the file.

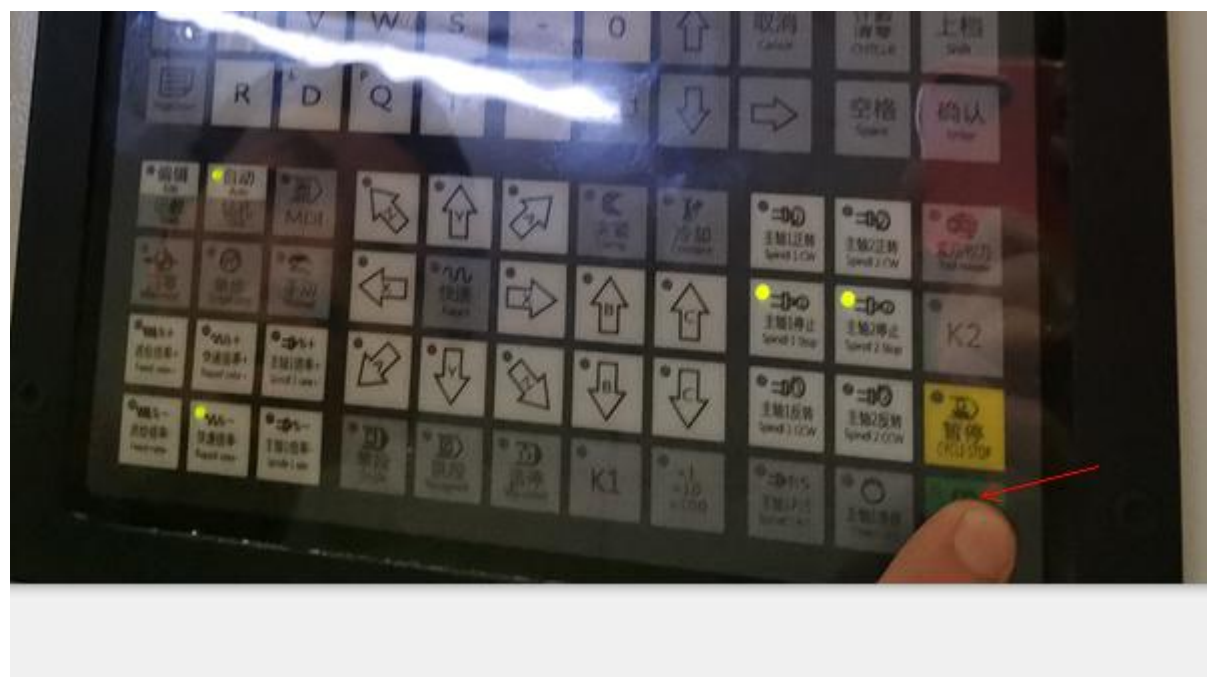




To show Processing position need to press "Position"



After file export, press “Auto”, then press “cycle start”.





If you want to check your G code and machine if setting right, You can press “single” after “Auto”, then press”cycle start” each time will run one line G code.



## 7. Language setting

Press “Edit”

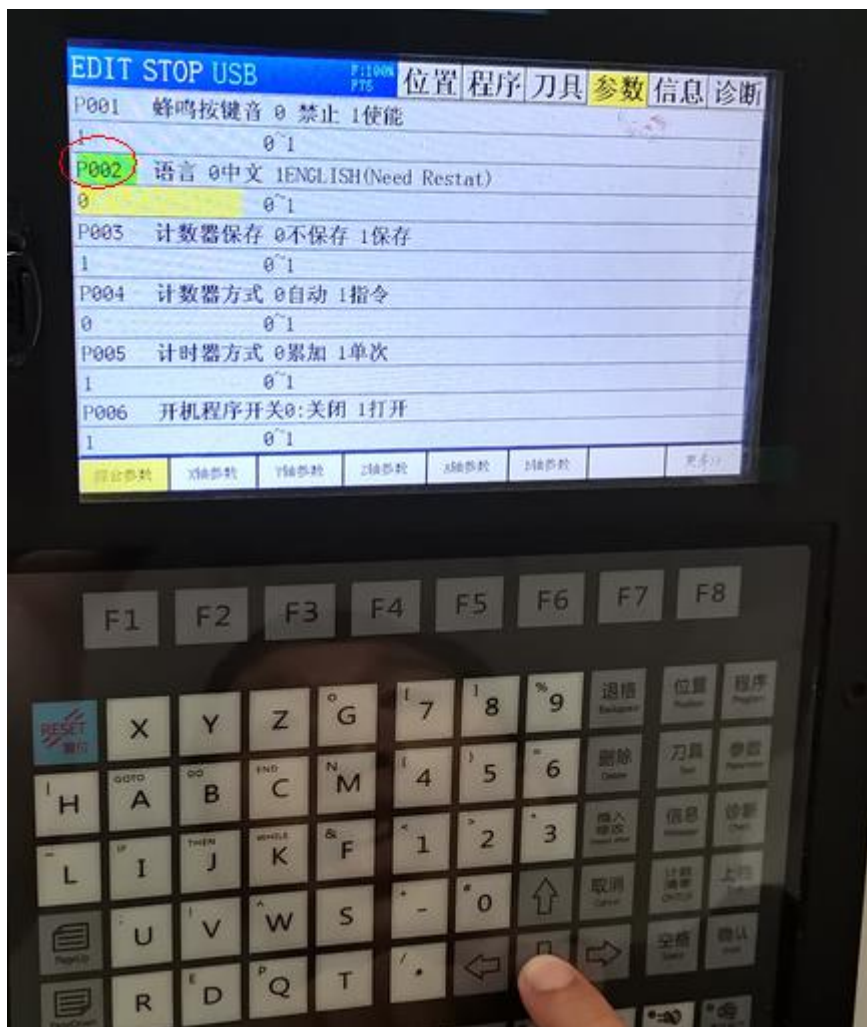


Then “parameter”

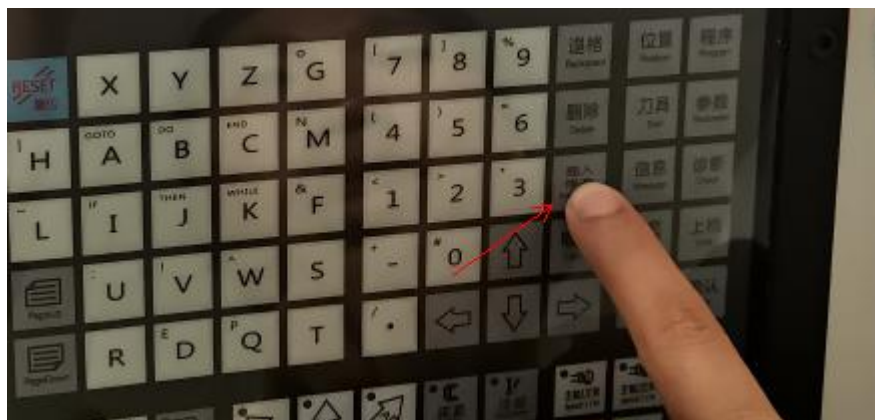


Move to P002





Press "Insert Alter"



"0" means Chinese, "1" means English, choose the number then press "Enter"